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Reference

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FM 1-55

FIELD MANUAL

GUIDE FOR THE OPERATION OF ARMY AIRFIELDS

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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GUIDE FOR THE OPERATION OF ARMY AIRFIELDS

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CHAPTER 1

GENERAL

Section I. PURPOSE AND SCOPE

1-1. Purpose

The commander of each Army installation having an airfield/heliport is responsible for the establishment and supervision of flight operations in accordance with AR 95-1. This manual provides general guidance for commanders and operations officers in the development and administration of Army airfield (AAF) operations and includes guidance for air traffic control, flight dispatch, and airfield services. Information and guidance herein will assist commanders and airfield operations officers in establishing and managing the operations division at Army airfields.

1-2. Scope

This manual—

a. Presents a division and branch concept of organization, but the information herein can be applied to other organizational concepts.

b. Provides a general summary of fixed and semifixed airfield operations and makes extensive reference to regulations, technical manuals, field manuals, technical bulletins, and other publications which contain information in more detail and may be directive on airfield operations. AAF operations officers should review the activities of

their airfield operations to insure that guidance contained herein has been considered.

c. Is not intended to contradict existing regulations or to prescribe mandatory requirements for subordinate commands when alternate courses of action are justified.

1-3. Definitions

Standard definitions are contained in AR 310-25. Standard abbreviations are contained in AR 310-50. Other abbreviations and terms, as used in this manual, are contained in the glossary.

1-4. Recommended Changes

Users of this publications are encouraged to submit recommended changes and comments to improve the publication. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commandant, US Army Aviation School, ATTN: ATSAV-CTD-DPD, Fort Rucker, Alabama 36360.

Section II. ESTABLISHING THE OPERATIONS DIVISION

1-5. Installation Planning

a. *Aviation Mission Requirements.* For proper development of the airfield and its facilities, the operations officer should be constantly alert to his current and future mission requirements. Mission requirements are the basis for justifying support facilities to provide aircraft maintenance, servicing, operational administration, air navigational aids (NAVAID), safe ground clearances, and airspace operational areas. The primary source of planning data and facility authorization will be

found in TM 5-803-4. In order to assure that aviation requirements are considered, the operations officer should be a member of the installation planning board.

b. *Site Selection.* For orderly development of work programs, system procurement, airspace requirements, and the necessary budgetary considerations, master planning considerations in AR 210-20 should be resolved. Site selection involving nongovernment owned lands may not be initiated at any level of command without specific approval

of the Department of the Army. AR 210-30 contains guidance for site selection within CONUS and US administered lands. Oversea commands establish their own regulations. Expansion plans or congestion may make it necessary to consider use of land not the property of the government for service roads, navigational aid sites, survey data points, access roads, approach/departure areas, takeoff safety zones, etc. TM 5-803-4 contains procedures for acquiring property rights to prevent erection of obstructions that threaten to jeopardize normal flight operations. For best public relations, a careful study of requirements should be made before initiating land procurement action. AR 405-10 contains reference regulations for pertinent guidance and the authority, policy, responsibility, and procedures for acquiring real property interest, to include the leasing thereof to meet requirements.

1-6. Airfield Classification

Airfields/heliports are classified according to the aircraft activity and air traffic control services available at the airfield. Based on these two factors, plus other considerations outlined in AR 95-9, a determination is obtained on what air traffic control and air navigational facilities are authorized. This includes such facilities as ILS, GCA, VOR, NDB, and runway and approach lighting.

1-7. Aircraft Authorizations

Authorization, allocation, and assignment of Army aircraft are explained in AR 95-40. Sufficient personnel must be available, or authorized, to operate and maintain the requested aircraft. Authorizations of aircraft, equipment, and supporting personnel are as listed in the currently approved TOE or TDA.

1-8. Personnel Requirements

The ATC unit mission responsibilities will determine the number of personnel required. For example, flight records and flight scheduling responsibilities may require additional clerical assistance. Guidance for personnel requirements is contained in the Staffing Guide for US Army Garrisons (DA Pam 570-551) and AR 570-2. DA Pam 570-551 and TOE provide guidance for determining the number and type personnel required to provide services at various classes of AAF's. AR 95-37 and TM 95-200 contain Army air traffic control information which must be considered in

determining personnel manning. Some of these considerations are—

- a. Ratio of civilian to military air traffic controllers.
- b. Status of trainee controllers.
- c. Minimum manning levels for the desired period of operation.
- d. Duty hours.
- e. Controller certification, rating, and general operating rules.

1-9. Obtaining Equipment, Authorization, Installation, and Maintenance

a. *The Army Authorization Documents System.* AR 310-49 outlines how the airfield authorization document (TDA or TOE) is developed or modified. The Aviation Electronics Configuration Directory (TB 750-1) contains a pictorial and functional description of avionics materiel. It is a handy reference as a single source of information on avionics.

b. *Terminal Air Navigation and Air Traffic Control Facilities.* TDA and TOE units should refer to AR 95-9 for airfield classification criteria and TB 95-1 for equipment standards. AR 95-9 provides procedures for acquiring air traffic control facilities and NAVAIDS from inception through commissioning. TB 95-1 contains detailed installation guidance, including appropriate references, for Army radar approach controls (ARAC), high and low density traffic control towers, instrument landing system (ILS), ground controlled approach (GCA), nondirectional radio beacon (NDB), terminal VHF omnidirectional range (TVOR), airfield operation radio communications, and related power systems.

c. *Mobile Electric Power.* Units using mobile electric power sources should refer to AR 700-72. Whenever possible, these types of power sources should be selected from an established DOD standard family of electric power generator sets.

d. *Aviation Air Traffic Control Unit.* The TOE for the aviation air traffic control unit contains a standard list of requirements. Equipment should be deleted or added, as required, to fulfill mission requirements. Items which may be needed are fire and refueling vehicles, weather teletype, and a wind sock.

e. *Air Conditioning Equipment Authorization.* Air conditioning equipment is authorized accord-

ing to the functional use of the area. AR 420-54 outlines policies and establishes procedures for installation in existing structures and identifies specific functional areas. Air traffic control operating quarters, weather forecast rooms, and pilot alert rooms are all primary military facilities which are authorized air conditioning or evaporative cooling (DOD Manual 4270.1M). TB 95-1 provides environmental control guidance for ATC facilities.

f. Priority of Equipment Distribution. (S)AR 11-12 outlines the unit priority of equipment distribution.

g. Effects of Extreme Cold Climates on Ordnance Materiel. The effects of extreme cold climates on ordnance materiel are explained in TM 9-207. The operational and maintenance methods and procedures outlined in this manual were obtained from field experience and testing laboratories and should be followed when they apply.

h. Spectrometric Oil Analysis. Spectrometric oil analysis determines the condition of equipment by applying a process of precision detection of metallic elements carried in used oil taken at specific intervals. AR 750-13 prescribes information on the Army spectrometric oil analysis program. TB 55-6650-300-15 outlines participation and sampling requirements.

1-10. Refuse, Water, and Sewerage

AR 420-47 provides guidance in the area of refuse collection and disposal. AR 420-46 pertains to water and sewerage. Both functions are a responsibility of the Post Engineer. Knowledge of functions should help in the maintenance of sanitary conditions in and about aviation facilities.

1-11. Obstruction Clearance

Any natural object or manmade structure that penetrates specific planes or surfaces in the vicinity of an airfield/heliport is considered an obstruction to air navigation. These planes and surfaces are defined in TM 5-803-4. TM 11-2557-26 (FAA 8260.3) contains obstruction clearance requirements as related to the development of instrument procedures. Obstructions to air navigation at Army airfields are marked and/or lighted in accordance with the National Standard contained in TM 5-823-4. Obstruction marking on objects which are not obstructions to air navigation are misleading and should be eliminated.

1-12. Construction

a. Planning. Planning factors to be considered in the selection and construction of roads, airfields, and heliports in theaters of operation are given in TM 5-330. A munition penetration table for determining thickness of protective bunkers for parked aircraft and other facilities is also included.

b. Design for Bituminous Surfaces. The principles of design for bituminous surfaces at airfields are contained in TM 5-888-8. Load bearing capacities of runways are determined by applying the procedures contained in TM 5-826-3 for rigid pavements and in TM 5-826-2 for flexible pavements. The Corps of Engineers is required to prepare a runway evaluation report for all new pavement construction and reconstruction. TM 5-826-4 contains instructions for the preparation and distribution of this report. Load bearing determinations for inclusion in FLIP's should be coordinated with the engineers responsible for the airfield.

c. Ammunition Storage Requirements. Ammunition storage requirements and applicable quantity-distance for separation of ammunition explosive storage area from aircraft runways, taxiways, operational parking areas, and aircraft dead storage area are contained in TM 9-1300-206. Procedures for processing waivers to these mandatory standards are outlined in AR 740-1.

1-13. Cost Guidance and Programming Costs

a. Cost Guidance. General cost guidance for typical standard airfield building and facility construction is provided in AR 415-17. DOD Manual 4270.1M presents broad technical criteria for construction of durable CONUS facilities and facilities in other areas when practical. For guidance in planning and estimating costs during the pre-planning phases of airfield development and improvement, the engineer office responsible for support of the aviation activity should be consulted. Figure 1-1 contains a functional layout for a typical AAF operations building.

b. Programming Costs. Minor construction for facilities costing under \$200,000 is governed by procedures contained in AR 415-35. Facilities costing over \$200,000 require programming under procedures contained in AR 415-15. For guidance and assistance in planning facility projects, the

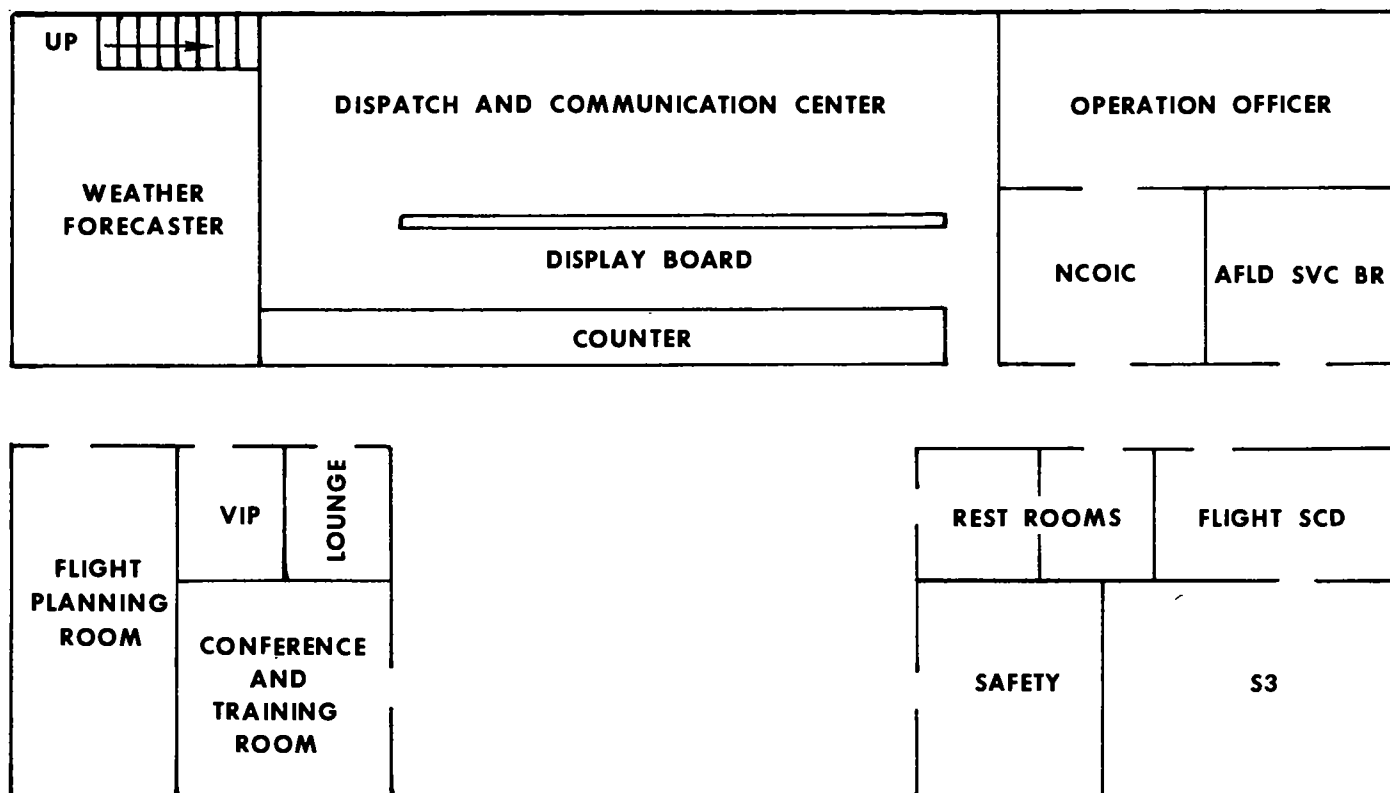


Figure 1-1. Typical AAF operations (single floor plan).

engineer office responsible for support of these projects should be consulted.

1-14. Disposal of Structures

Disposal of structures should be considered

within the master planning phase of installation development. AR 415-13 governs the actual disposal. It references related actions and reports and other regulations that may also apply for specific items or procedures, depending on the nature and/or type of facility involved.

Section III. MANAGING THE OPERATIONS DIVISION

1-15. Development of Airfield Management

Close adherence to the guidance, information, and principles contained in this manual can assist in the establishment of smooth and efficient Army airfield operations.

a. Comptroller Services. The comptroller services are a valuable aid in getting the most out of the dollar spent. In addition to performing those functions normally associated with programming, budgeting, finance and accounting, management analysis, cost analysis, and management improvement, the comptroller also analyzes problem areas and makes recommendations on supply of technical skills, manpower productivity and utilization, and adequacy of personnel procurement. AR 5-2

outlines the function of the Army Comptroller in major and subordinate commands, AR 1-24 outlines Army management doctrine, and FM 101-5 contains information for the Army in the field.

b. Army Cost Reduction Program. DA Pam 570-4 contains general information on the manpower voucher system, tables of distribution and allowances, quantitative staffing standards, and staffing guidance. AR 11-20 establishes cost reduction programs to improve management and operating practices at all levels and to stimulate positive management improvement actions. Proper application will insure achievement of required military capability at the most economical costs.

c. Budget. Although the operations division will not prepare a detailed budget, the airfield opera-

tions officer should be familiar with the following financial considerations:

(1) *Civilian pay.* Civilian pay procedures for Department of the Army employees are contained in AR 37-105. This regulation includes such items as time and attendance, state and Federal income tax, retirement, and collection of indebtedness. AR 37-105-1 contains current salary tables.

(2) *Civilian uniforms or clothing allowances.* Under certain conditions, civilian employees may be furnished uniforms or paid a clothing allowance. AR 670-10 refers to civilian firefighters, flight instructors, and other specified civilian employees. If special clothing is required for the alert service crew, permission must be obtained from higher headquarters (AR 670-10).

(3) *Imprest funds.* Imprest funds are used to make payments for small purchases of material, nonpersonal services, or travel and transportation expenses within the limitations prescribed and authorized in ASPR 3-607 and AR 37-103-1.

(4) *Joint use facilities.* Programming and financing of facilities at joint use airfields or installations are contained in AR 37-14. AR 405-80 covers the granting of hangars, parking strips, buildings, and other facilities to non-Army tenants. Services and supply agreements between host and tenant units are covered in AR 37-19.

d. Work Measurement.

(1) *Guidance for TDA unit commanders and managers.* TDA units can obtain guidance for work measurement from AR 1-50. This regulation provides commanders and managers with data for improving the management of their activities and for obtaining optimum use of resources when—

- (a) Determining staffing data.
- (b) Preparing estimates of time required to perform given workloads.
- (c) Developing standard costs.

(2) *Establishing time standards.* Work measurement information for the working level supervisor and manager is contained in DA Pam 1-50. This pamphlet provides guidance for measuring the amount of work accomplished and establishing a time standard for performance of acceptable work. Work measurement results are used to standardize and implement more effective methods for doing a job.

e. Management Analysis. DA Pam 1-51 describes the concept of management analysis and the service performed by management analysis

staffs. Management analysis personnel are available to provide assistance with organizational problems and in management improvement activities.

(1) *Management improvement principles.* AR 1-65 provides both military and civilian supervisory personnel with easily understood analytic management improvement principles which, when properly applied, will—

- (a) Increase efficiency.
- (b) Improve productivity.
- (c) Realize maximum effective use of manpower.

(2) *Management improvement techniques.* DA Pam 1-52 describes the use of the following management improvement techniques:

- (a) Work distribution charts.
- (b) Work count.
- (c) Flow process charts.
- (d) Motion economy.
- (e) Layout studies.

f. Logistics Readiness. AR 11-14 provides guidance to attain and maintain an operational status sufficient for units to accomplish their assigned mission. To assure airfield logistic readiness, the following items must receive continuous supervision:

- (1) Controls to insure supply and maintenance priorities.
- (2) Methods to assure disposition of excess supplies, equipment, and facilities.
- (3) Consider placing equipment in administrative storage status (TM 740-90-1).
- (4) Planning to support field exercises or operational missions.

g. Committee Management. The airfield operations officer (para 2-2a) will be a member or chairman of several committees. AR 15-1 prescribes policies and procedures for exercising control, establishment, use, and termination of committees by agencies and commands of DA. Application of the guidance provided in AR 15-1 will—

- (1) Insure sound management practices in the use of committees.
- (2) Prevent the use of committees as a substitute for staff and command action, except where the committee arrangement is clearly superior to normal actions.
- (3) Eliminate duplication and overlap between committees.
- (4) Insure that committees are terminated promptly when their usefulness has ended.

1-16. Airfield Inspection Guide

a. Checklists. In order to assure quality of service and maintenance of facilities, an airfield inspection should be performed quarterly in conjunction with daily spot inspections. Checklists should be prepared containing those items considered essential in maintaining a well organized and functional airfield (para 2-10b and c).

b. Checklist Modification and Distribution. The checklists in *a* above should be expanded or modified to suit the airfield. They should be furnished to the branch chiefs in order that they fully understand what is expected of them.

1-17. Materiel Management

Airfield operations officers are required to insure that the materiel of their division is properly safeguarded, accounted for, and administered as prescribed in AR 710-2. Accounting for lost, damaged, or destroyed property by report of survey or administrative action is contained in AR 735-10 and AR 735-11.

1-18. Inspector General Activities and Procedures

a. Right of Access to an Inspector General. Requests for either an Inspector General or an Acting Inspector General for the purpose of receiving and processing complaints and requests for assistance, advice, or information may be submitted through channels. All military and civilian personnel should, when practicable, be offered the opportunity of presenting their individual complaints in person to an Inspector General at least once each quarter of a year. Personnel of the command will be advised of their right of access to an Inspector General by the permanent posting of notices on bulletin boards, using the format contained in AR 20-1.

b. Periodic Inspection by an Inspector General. Most facilities will receive a periodic inspection by an Inspector General. Inspector General reports require special handling and are exempt from mandatory release according to AR 340-17.

1-19. Claims for or Against the Army

a. Collection. Administrative collection of claims against military personnel or civilian employees is accomplished under the provisions of AR 27-40. AR 27-40 does not provide for the collection, through offset of salaries, for claims associated with damage, loss, or destruction of Army property.

b. Federal Tort Claims Act. Information concerning claims under the Federal Tort Claims Act is contained in AR 27-20. This regulation covers those cases where military personnel or civilian employees may have been negligent in the performance of their duties. The regulation is not all inclusive and has many exceptions. Claims properly executed (AR 27-20) will be accepted and transmitted to the nearest Judge Advocate General.

c. Claims Limitation. Claims which concern the use of a government vehicle any place, or use of other United States property on government installations, are submitted under the provisions of AR 27-20. These claims cannot exceed \$1,000.

d. Release of Information to the Public. Release of information to the public must be carefully considered. AR 27-40 and AR 340-17 furnishes detailed information on the items which may be released to the public and the procedure to follow for those items that are exempt from release. AR 27-40 also furnishes information which relates to the Department of the Army personnel involved in civil litigation.

CHAPTER 2

OPERATIONS DIVISION

2-1. General

The operations division of a recommended airfield organization consists of three branches. The division is responsible for air traffic control, flight dispatch, and airfield services (fig 2-1). The division normally provides—

- a. Servicing facilities for locally based and transient aircraft.
- b. Weather service.
- c. Landline communications with flight service stations (FSS)/air route traffic control centers (ARTCC)/approach control.
- d. Crash/rescue facilities.
- e. Flight planning facilities.
- f. Air traffic control (ATC) facilities.
- g. Clearance authority.
- h. Notice to airmen (NOTAM) service.

2-2. Personnel

The operations division administrative staff consists of an airfield operations officer, an operations sergeant, and a clerk-typist. Depending on the responsibilities assigned, additional personnel may be required (para 1-8).

a. Airfield Operations Officer.

(1) *Qualifications.* The airfield operations officer should—

- (a) Hold a current military pilot rating or be employed as an FAA licensed Army pilot.
- (b) Hold a current instrument qualification under the provisions of AR 95-63.
- (c) Be fixed and rotary wing rated if operation involves both categories.
- (d) Meet the requirements of a clearance officer as outlined in AR 95-1.
- (e) Have completed at least one formal air traffic control course of instruction with the Federal Aviation Administration (FAA), Army Aviation School at Fort Rucker, US Air Force, or a recognized university.

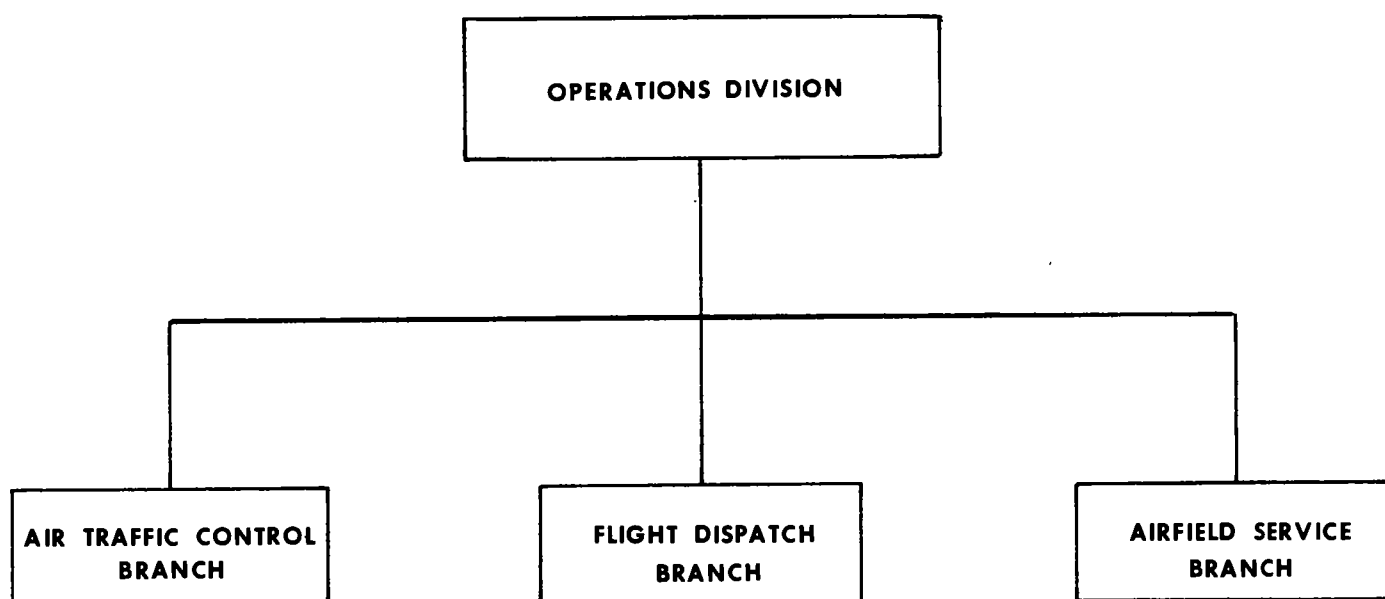


Figure 2-1. AAF organization.

(f) Meet the qualifications outlined in AR 611-101 for MOS 1982.

(2) *Responsibilities.* The airfield operations officer is responsible for—

(a) The management, direction, and supervision of the operations division.

(b) Formulating and maintaining emergency plans.

(c) Coordinating with post units for required support, i.e., transportation, engineers, and provost marshal.

(d) Establishing and administering an Army aviation flight safety program (chap 6). (ATC facility inspection checklists are contained in TM 95-200.)

b. Operations Sergeant. The operations sergeant is responsible for—

(1) Duties of the NCOIC of the operations division.

(2) Assisting the operations officer in supervising and coordinating the functions of each branch.

c. Clerk-Typist. The clerk-typist is responsible for—

(1) Maintaining files and records in accordance with paragraph 2-3

(2) Typing and preparing all material in proper format for the operations division in accordance with AR 340-15.

(3) Maintaining current files on all regulations, circulars, and pamphlets.

2-3. Files and Publications

In addition to maintaining a file of regulations of higher headquarters, operations officers should insure that applicable publications are available at the local area of operations. The operations division should maintain a master file of the publications considered appropriate. The applicable documents are listed in appendix A. Publications recommended for the individual branches are shown by footnotes in appendix A.

a. Filing Instructions. AR 340-18 series and DA Pam 310-13 contain instructions on the use of the Army functional filing system. DA Pam 310-15 contains the filing method to be used for blank forms.

b. Listing of Military Publications. A listing of military publications is contained in DA Pams 310-1, -2, -3, and -4.

c. File Destroyer. File destroyer, ABC M4, is intended for use outside CONUS and is designed to destroy the contents of a normal four-drawer

file cabinet completely. TB CML 110 gives information on the handling, functioning, storage, shipment, and destruction of this item. TB 3-300-1 describes the use of Emergency Destroyer M3.

d. Safeguarding Data. AR 340-16 explains "FOR OFFICIAL USE ONLY" markings and the exchange of this information between various components and individuals. AR 380-150 describes access to and dissemination of classified data. A continuing system of declassifying DOD information is established and detailed in AR 380-5.

2-4. Airfield Officer of the Day (AOD)

Arrangements should be made to designate an AOD whenever the airfield is operated during other than normal duty hours. The AOD will function as a representative of the operations officer as outlined in an operations division SOP.

2-5. Letters of Agreement

a. Terms of Responsibility. Letters of agreement should be developed and adhered to for the control and management of aircraft within the ATC system and special use airspace in which an operational or contingency mission exists. The letters constitute agreement between the two or more agencies involved and specify the terms of responsibility under which either or both will operate. See TM 95-200, AR 95-9, and AR 95-50, for details and administrative procedures.

b. Periodic Review. A complete record of the development and implementation of the agreement should be retained for as long as it remains in effect. Copies of the agreement should be readily available to all principals involved in its implementation or execution. Periodic review of the agreement is necessary to assure that all terms remain valid and the desired protection is maintained.

c. Filing. A complete file of agreements should be maintained in the office of the operations officer. Selected letters of agreement should be maintained in the files of the facility executing any of the terms or functions of the agreements. The functions should also be contained in the SOP developed for the operations positions.

2-6. Operations Letters

a. Use. Operations letters are prepared between facilities located on the same airfield. TM 95-200

lists some types of operations which would require use of an operations letter. For example, this letter would be used between airfield operations and tenant units.

b. Scope. Since operation procedures vary and units are subject to relocation, each letter should only address a single subject.

2-7. SOP and Facility Memorandum

a. SOP Format. SOP's are developed to regulate and standardize the internal operation of a facility. They contain instructions pertaining to the intrafacility administrative and operational practices and procedures of a permanent nature. Suggested format is in appendix C.

b. Facility Memoranda. Facility memoranda contain intrafacility instructions of a temporary or informative nature which are prepared in letter form.

2-8. Instrument Procedures

a. Development. Instrument procedures are developed in accordance with AR 95-9. The FAA will furnish technical assistance for development of approaches when requested. Criteria for developing instrument approach procedures and the resulting minimums are contained in TM 11-2557-26 (FAA 8260.3).

b. References. AR 95-9 contains cross-references to appropriate technical manuals and regulations pertinent to the development, maintenance, and use of instrument procedures and support aids.

2-9. Electronic and Visual Navigational Aids

a. Requirements. Requirements for electronic aids are determined during the master planning phase and/or when a specific change in mission or special operations requirements exists. AR 95-9, TB 95-1, and TM 11-2557-26 (FAA 8260.3) should be consulted to determine benefits that can result in using different systems for which the airfield may qualify and procurement may be justified. Technical requirements and specifications for visual aids are contained in TM's 5-803-4, 5-811-5, 5-823-4, and 11-2557-26 (FAA 8260.3). A study of absolute requirements, as opposed to nice-to-have items, should be conducted and used in the decision of what is needed to satisfy operational and safety requirements.

b. Closed Loop Support. Only those pieces of NAVAID equipment that are considered critical items qualify for closed loop support (CLS). AR 710-1 prescribes procedures for the CLS program.

2-10. Evaluation of Airfield ATC and NAVAID Facilities

a. Evaluations. The airfield commander should conduct evaluations of those air traffic control and NAVAID facilities used at the airfield. He must provide adequate flight facilities and insure that they are maintained.

b. Checklists. TM 95-200 contains detailed checklists that have been compiled to assist in the ground and flight evaluation of the control tower and NAVAID facilities.

c. Flight Evaluation of NAVAID. TM 11-2557-25 (FAA 8200.5) contains performance standards and tolerances for flight inspections of NAVAID facilities. Technical performance standards and tolerances for ground inspections of NAVAID facilities are contained in TM 11-2557-28 (FAA 6000.6).

2-11. FAA NAVAID Flight Checks

Subject to other operational requirements, maximum assistance must be provided aircraft engaged in FAA flight inspection of NAVAIDS. Air traffic control personnel must maintain direct contact with the pilot and exchange information regarding his intentions and known traffic in the area.

2-12. Disaster Operations

a. Authorization for Disaster Operations. Disaster relief operations are authorized by AR 500-60. Unit commanders having Army aircraft under their control are authorized by AR 95-1 to provide emergency flights for civil use, if no suitable civil means are available. Air Transportation Agreement (LRA), DD Form 1381, is executed as outlined in DOD Directive 4515.13-R. Major commands are required to formulate disaster plans for their area. The operations officer should know how the airfield interfaces with those plans.

b. Disaster Recovery Procedures. Disaster recovery procedures, as related to nuclear detonation, are contained in TM 5-225. The guidance provided is directed toward the survival of the maximum number of personnel which may be af-

ected by radiological fallout rather than survival from blast and thermal effects.

2-13. Aircraft and Passengers Requiring Special Handling

a. Presidential Aircraft. AR 190-7 establishes physical security standards for the protection of the US Army aircraft for presidential support missions. This regulation covers such items as the closure of roads, checking the runway, and control of personnel and outlines responsibilities for physical security measures and personnel qualifications. FAA Publication 7110.8 contains special air traffic control procedures.

b. "Blue Bark" Passengers. AR 59-120 contains information concerning the status and treatment afforded dependents of deceased military personnel and civilian employees of DOD when travel to, from, and between oversea areas is required in connection with the death of an immediate family member. The regulation assigns the title of "Blue Bark" to these passengers and their escorts but does not itself authorize transportation.

c. Aerial Dispersal of Pesticides. If aerial dispersal of pesticides is required from the airfield, AR 40-574 should be consulted. In addition to approval by higher headquarters, extensive coordination is required. This regulation references other publications to consult when spraying is to be conducted—

- (1) Over nonmilitary property.
- (2) In conjunction with a civilian pest control program.
- (3) As a result of a disaster.

d. Army Flying Club Program. Whenever an Army flying club is established at an Army airfield, the airfield operations officer will possibly be responsible for carrying out the installation commander's duties for supervision and administration. Rules governing the operation of these clubs are contained in AR 230-11. In particular, the operations officer will be required to assist in establishing local flying rules and safety programs and to insure that FAA rules and regulations are followed.

e. Quarantine Regulations. To prevent introduction and dissemination of human, pest, and plant diseases and arthropod vectors by vessels, aircraft, or other transport of the Armed Forces, AR 40-12 conforms with the regulations of the US Department of Health, Education, and Welfare;

Department of Agriculture; Treasury Department; and Department of the Interior. It is the responsibility of the Armed Forces commanders to comply with these regulations and to cooperate with the officials of the above agencies.

f. Evacuation of Patients. Evacuation of patients, under the control of the Army, will be by air when transportation is available and conditions are suitable. Military airlift command (MAC) aircraft will be used to evacuate patients. AR 40-20 sets forth the above policy and also prescribes responsibilities of CONUS and oversea commands.

2-14. Cargo Handling

a. Ammunition Handling. The care and handling of ammunition shipments by air and at airfields require special attention in accordance with TM 9-1300-206 (para 1-12c).

b. Transportation and Movement of Special Cargo. Nuclear weapons, components, and related classified nonnuclear material require special logistic movement support. The responsibility, procedure, and modes of transportation for movement of this material are contained in AR 55-203. Transportation of radioactive and fissionable material is covered in AR 55-55. Department of the Army policies concerning the movement of cargo by Army or commercial aircraft are contained in AR 55-16. This regulation is broad in scope and pertains to the use of surface and air transportation for shipment of cargo worldwide.

2-15. Flight Lunches and Midnight Meals

Flight lunches and midnight meals may be obtained by submitting DA Form 2970 in accordance with the instructions contained in AR 30-46. AR 30-1 lists different monetary rates for flight lunches based on the per diem status of the individual.

2-16. Displays and Demonstrations

Major subordinate commanders may normally approve participation of organic aircraft in aerial demonstrations. Rules for participation are in AR 95-1.

2-17. Snow and Ice Removal

At installations where snow or ice might constitute a hazard, AR 420-72 requires a snow removal and ice control plan. The plan will contain at least the following:

- a. An established priority for clearance of designated areas.
- b. Identification of equipment to be used.
- c. A listing of quantities and storage location of materials to be used.
- d. Training material for equipment operators and supervisors.
- e. Provision for round-the-clock notification of forecasted snow and ice storm intensities and duration.

2-18. Fire Prevention and Protection

a. *Fire Protection Standards and Firefighting Techniques.* AR 420-90 lists fire prevention and protection standards, as applied to post engineers, for Army installations in the 50 States and makes directive several other referenced publications. TM 5-315 covers firefighting and rescue equipment and firefighting techniques. The manual includes figures which depict the general arrangement of fuel, oil, and hydraulic tanks on Army aircraft. Whenever airfield crash and firefighting units are part of the division, the operations officer should review AR 420-90 and DA Pam 420-2 for—

- (1) Effective use of personnel.
- (2) Maximum use of equipment.
- (3) Coordination requirements.
- (4) Work analysis.

b. *Motorized Fire Pumping Apparatus.* Airfield allowances for motorized fire pumping apparatus are based on the number and type of aircraft operations. Reporting requirements and rates for rental fire trucks are explained in AR 420-19. Use of two-way radio requires approval of the installation commander.

c. *Fire Truck Operation.* The operation of fire trucks Models 530 BA and 530 BAW is covered in TM 5-4210-200-20, while TM 5-4210-212-15 is directed toward Models 530 BAM and 530 BAWM. Preventive maintenance procedures for fire protection equipment are contained in TM 5-687.

d. *Personnel and Facilities.* AR 420-90 states that personnel allowances for AAF's will provide for a four-man company on duty during all operating periods for the first piece of fire apparatus and three men for each additional piece of apparatus in service. TM 5-803-4 contains information concerning authorized floor area for airfield fire and rescue stations.

e. *Aeromedical Evacuations.* Procedures for

aeromedical evacuations are covered in AR 40-20 and DOD directive 4515.13-R.

2-19. Weather Services

Weather services available from the USAF are outlined in AR 115-10. The Air Weather Service (AWS) organization, administrative and logistical support responsibilities, and the Army responsibilities are covered. Procedures to be followed in stating a requirement for weather service are contained in AR 115-12.

2-20. Hurricane Evacuation

a. *Joint Policy and Responsibility.* AR 95-87 prescribes joint policy and responsibility regarding hurricane evacuation procedures for military aircraft in the Continental United States.

b. *Commander's Actions.* During hurricane evacuation, Army commanders of airfields and flight activities will, at their own discretion, evacuate assigned aircraft and impose temporary restrictions on the use of flight facilities under their control.

2-21. Unmanned Free Balloons, Moored Balloons and Kites, and Unmanned Rockets

a. *Rules for Operation.* AR 385-70 prescribes rules approved by the Joint Chiefs of Staff which govern operations of unmanned free balloons, moored balloons and kites, and unmanned rockets conducted by or for any agency of the Department of Defense. Federal Aviation Regulation 101 defines these types of objects and may be acquired as outlined in AR 95-14.

b. *Permission for Operation.* Permission and/or waiver for operation of these objects must be in accordance with the rules set forth under AR 385-70. Commanders and their responsible agents must be aware of the rules in order to provide guidance for effective operations and to assist in reporting violations of rules.

2-22. On-the-Job Training

All personnel within the division should be included in an OJT program. The air traffic control training program is outlined in ASubjScd 1-4 and TM 95-200. ASubjScd 1-7 contains the training program for flight coordinators. Each airfield should develop programs to fit its individual requirement. DA Pam 350-10 contains information on formal courses of instruction which are available to Army personnel.



CHAPTER 3

AIR TRAFFIC CONTROL BRANCH

3-1. General

The air traffic control branch provides those services necessary to insure a safe and orderly flow of aircraft on and in the vicinity of the airfield. The branch chief recommends to the operations officer improvements in traffic flow, NAVAID location, communication systems, emergency procedures, and air traffic control procedures.

3-2. Air Traffic Control Branch

a. Organization. Depending on the facilities authorized, this branch may have a terminal control section comprised of one or more elements which furnish control tower, approach control, GCA service, and electronic repair (fig 3-1).

b. Responsibilities. Controller positions of operation are described in TM 95-200 and manning levels are determined by airfield activity and hours of operation. Normally, each shift in a tower, GCA, or approach control, will include a shift supervisor and sufficient rated controllers to man the required positions of operation. Controllers must receive qualification training and

become facility rated for the airfield at which they are assigned (TM 95-200). Facility chiefs and supervisors are responsible for developing training programs in accordance with ASubjSed 1-4 and AR 95-37, recommending facility improvements as outlined in TM 95-1, maintaining complete files of reference material, and insuring that the provisions of TM 95-200 are followed for facility operation.

(1) Control tower controllers—

(a) Issue control instructions (in accordance with FAA Publication 7110.8) to aviators to insure the safe, efficient, and expeditious flow of traffic on and in the vicinity of an AAF.

(b) Issue instructions to aviators concerning takeoff and landing directions, winds, altimeter settings, and information on items which may be hazardous to the aircraft.

(c) Control the ground movement of aircraft, vehicles, and personnel on the aircraft movement surface of the airfield.

(d) Relay IFR and special visual flight rules (SVFR) requests to the unit responsible for furnishing IFR service to the airfield.

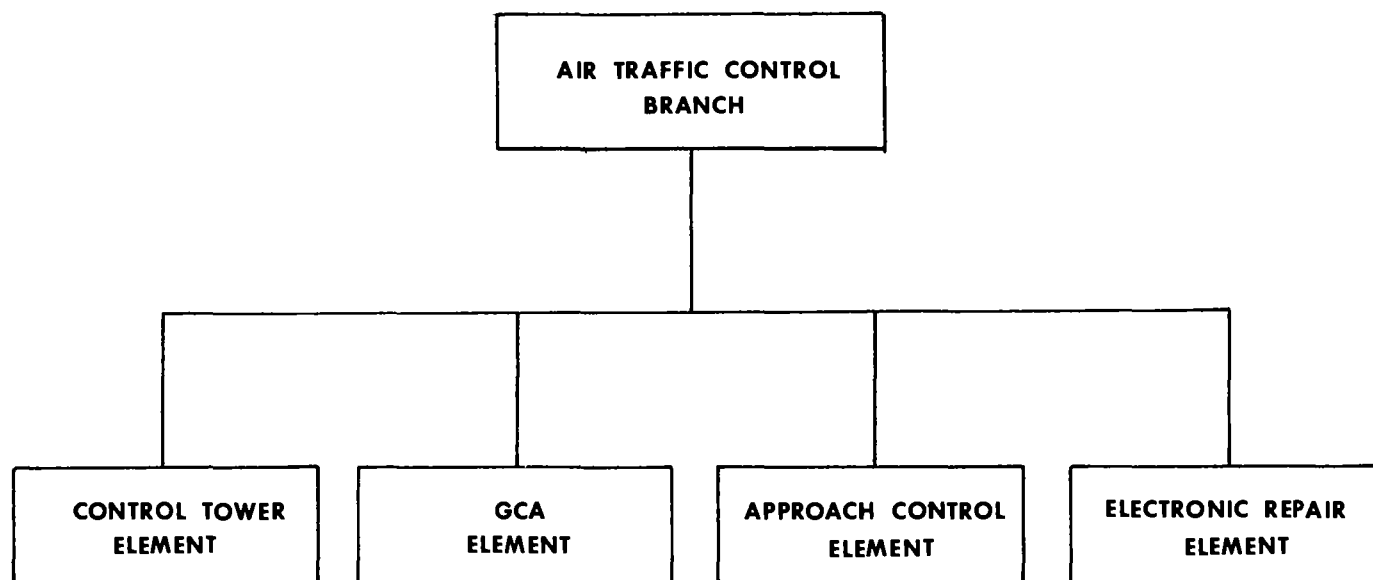


Figure 3-1. Air traffic control branch organization.

(e) Monitor navigational aids and notify the operations officer and the electronics repair unit when equipment is not functioning properly.

(f) Take visibility observations in accordance with procedures established in operations letters between the facility and the Air Weather Service or National Weather Service. (To make limited weather observations, the controller must have received weather certification.)

(2) GCA controllers—

(a) Provide radar approach guidance to aviators requesting the service.

(b) Monitor approaches in accordance with procedures contained in FAA Publication 7110.8.

(c) Maintain currency and proficiency in accordance with AR 95-37.

(d) Verify radar alinement and notify the operations officer and an electronic maintenance technician whenever a malfunction is suspected or indicated.

(3) Approach controllers—

(a) Formulate and issue air traffic control clearances for IFR and SVFR aircraft within their designated area of responsibility.

(b) Apply the separation standards contained in FAA Publication 7110.8 when controlling aircraft.

(c) Furnish additional services within equipment capabilities and as workload permits.

(4) Electronic repair element. Provides direct/general support for all electronic and ground navigational equipment assigned to the airfield. GCA and NAVAID equipment repairmen are in the electronic repair element (para 3-3e(2)).

3-3. Air Traffic Control Facilities and Personnel

a. Facility Equipment.

(1) *Facility construction and equipment installation.* Air traffic control facilities are constructed and equipment is installed in accordance with the criteria and guidance contained in TB 95-1. Authorized equipment by type, number, and function is also included. Provisions are made for airfields with low or high aircraft traffic densities.

(2) *Equipment standards and procedures.* Standards and procedures applicable to installed equipment are contained in TM 95-200 and FAA Publication 7110.8. Care must be exercised in the maintenance and calibration of instruments which provide direct information readouts for relay to aviators, i.e., altimeter and wind instruments. AR

750-25 assigns commanders the responsibility for establishing calibration service for Army activities within their command. This may include cross-servicing agreements which are accomplished in accordance with AR 37-27.

b. *Facility Operation.* An orderly and comprehensive management program will provide a smoothly operating air traffic control facility. Those guidelines and requirements outlined in AR 95-37 and TM 95-200 must be incorporated in the appropriate SOP. The airfield operations officer must provide followup supervision to assure updating and correctness of existing facility management practices. Use of the ground and in-flight checklists contained in TM 95-200 will assure that major operational areas are scrutinized.

c. *US Army Aeronautical Services Office (USAASO).* The Department of the Army executive agency for air traffic control, ground support facilities, and flight information is USAASO. From time to time USAASO will conduct onsite reviews of those areas which fall within its purview of responsibility. USAASO also provides technical assistance, when requested, to establish, revise, or modify ATC facilities and/or procedures. AR 95-23 contains details concerning USAASO's tasks and functions.

d. *DA Regional Representative (DARR).* Within their geographic areas of responsibility, the DARR represents the DA and Army field commands on all airspace matters processed through the FAA regional office to which they are assigned (AR 95-50). He is the point of contact for USAASO/FAA support or coordination.

e. Personnel.

(1) Air traffic controllers.

(a) *Classification.* The civil service classification for air traffic controllers is GS-2152 with the appropriate option (Terminal, Station, Center, or General). Army enlisted air traffic control MOS classifications are: MOS 93H, ATC tower operator; MOS 93J, ATC GCA specialist; MOS 93K, ATC approach control en route specialist; and MOS 93L, ATC chief.

(b) *Medical standards.* AR 611-201 requires air traffic controllers to satisfactorily pass a class 2 physical examination annually. Temporary restrictions on flying duties outlined in AR 40-8 for crewmembers also apply to the controllers. The ATC SOP should include provisions that will insure satisfactory compliance with the intent of AR 40-8. The airfield flight safety officer

(para 2-2a(2) (d)) should assist in the management of this program. AR 40-501 covers details on the medical standards involved.

(c) *Training records.* Experienced and qualified Army controllers are in strong demand throughout the world. To be effective, these personnel receive special category handling that requires accurate information to be entered on DA Form 3479-R (Air Traffic Control Training and Proficiency Record (LRA)). Air traffic controller training records are maintained and forwarded as a semipermanent document in the individual's military personnel records jacket. AR 640-10 per-

tains to personnel records. TM 95-200 contains the format for the locally produced DA Form 3479-R.

(2) *Electronic repair element.* An Army electronic repair element should have the necessary personnel to service authorized ATC and NAV-AID equipment. Recommended personnel are: avionics equipment maintenance supervisor, NCO, MOS 35P(); ground controlled approach radar repairman, MOS 26D(); avionics mechanic, MOS 35K(); avionics communications equipment repairman, MOS 35L(); and avionics navigation equipment repairman, MOS 35M().



Figure 3-2. Aircraft control central AN/TSQ-70A.

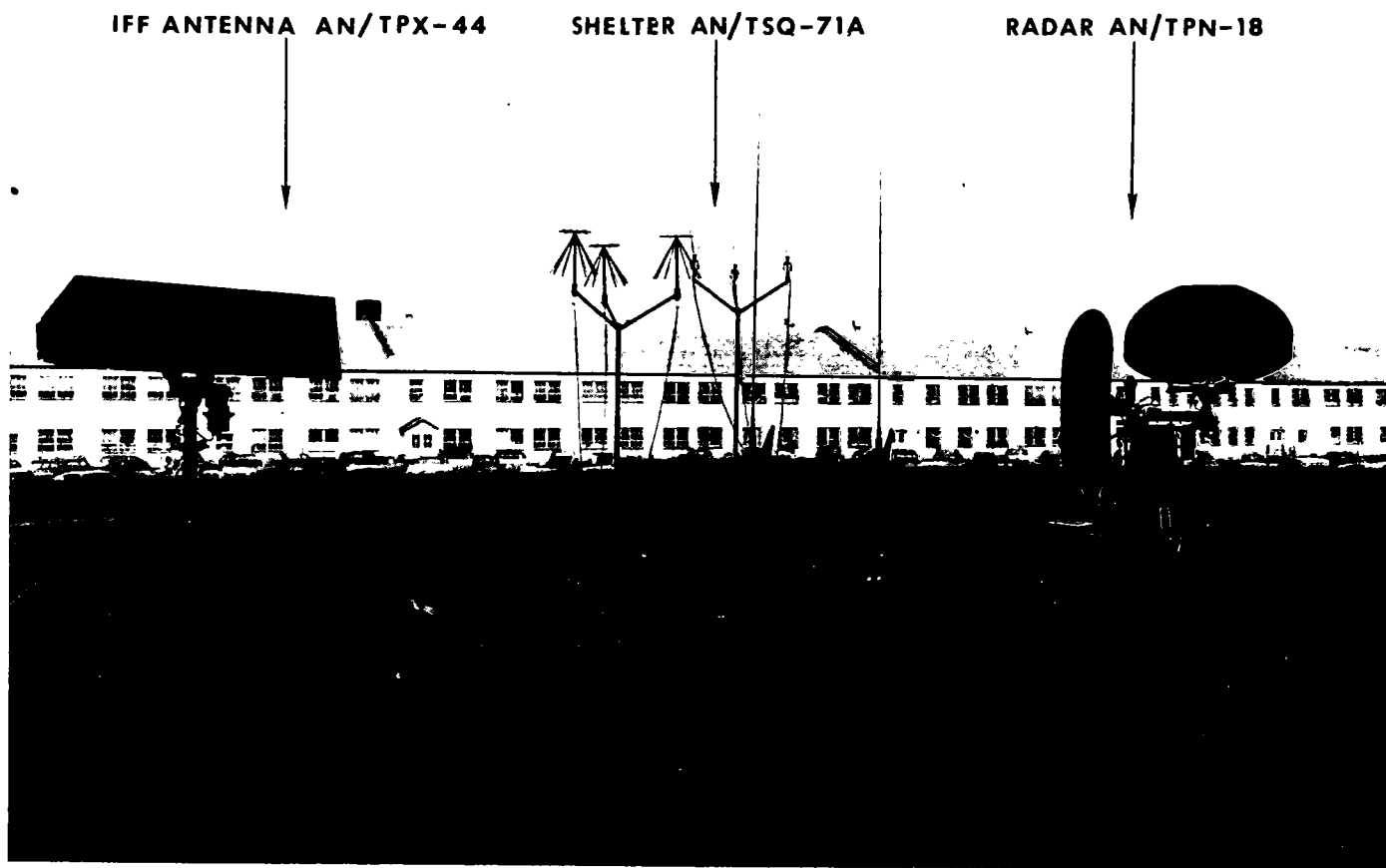


Figure 3-3. Landing control central AN/TSQ-71A.

3-4. Flight Information Publications (FLIP, NOTAM, and Field Notices)

a. *FLIP Requirements for ATC Facilities.* The requirement for maintaining FLIP, aeronautical charts, and diagrams in the operating areas of ATC facilities is contained in TM 95-200. AR 95-14 provides instructions for the requisition and distribution of FLIP documents. Recommended control tower publications are indicated in the footnotes of appendix A.

b. *NOTAM Services.* Within CONUS, the Army uses the NOTAM system operated by the FAA. Where mission dictates, selected Army airfields also operate under the Air Force NOTAM system. Operating procedures for the FAA NOTAM system are contained in FAA Publication 7110.10, Flight Services. Oversea commands, Alaska, and Hawaii operate under one of several systems that may include the Air Force, host country, and/or an Army system.

c. *Field Notices.* Field Notices are prepared as correspondence to announce the proposed commissioning, decommissioning, or modification of navi-

gation, airfield lighting, air traffic control, or weather facilities. The format for Field Notices is contained in AR 95-9.

3-5. Controller Training

a. *Qualification to Perform ATC Duties.* In addition to MOS award or satisfactory completion of an air traffic control course, proficiency and remedial training requirements in AR 95-37 and TM 95-200 must be complied with to qualify the controller to perform ATC duties.

b. *Facility Training Manual.* ASubjSed 1-4 is used in developing the facility training manual.

3-6. Air Traffic Control Equipment

a. *Mobile and Fixed ATC Equipment.* Army air traffic control equipment is of the mobile and fixed installation types. Equipment is provided for control towers, approach controls, GCA, and NAV-AID. Procurement and installation of fixed equipment for TDA units are covered in TB 95-1. The authority for auxiliary engine-driven generator sets necessary for sustained operations of air-

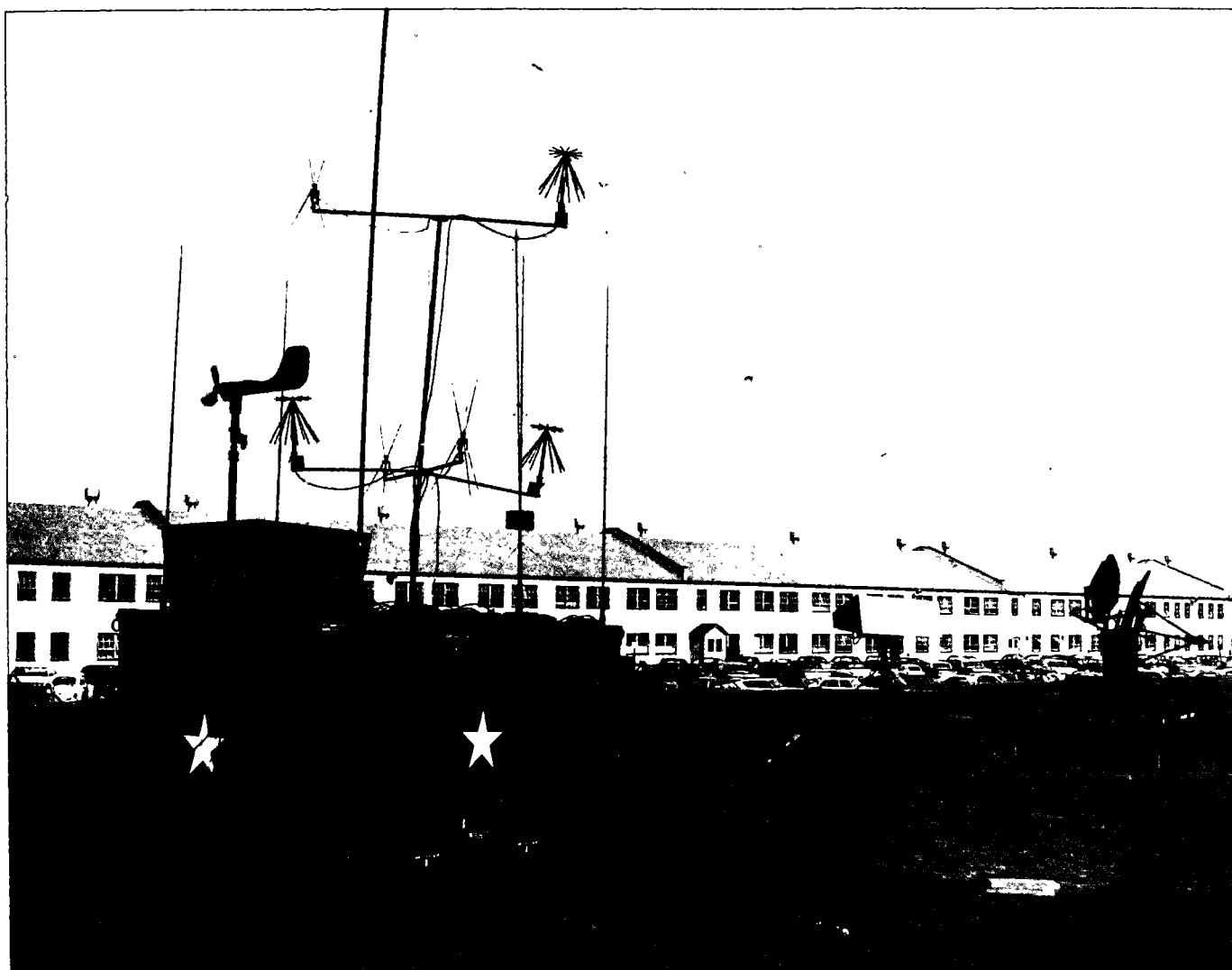


Figure 3-4. Landing control central AN/TSQ-72.

field/heliport control tower and communication equipment is cited in AR 420-43 and TM 95-200. Examples of mobile equipment available for units organized under TOE are—

(1) *Aircraft control central AN/TSQ-70A.* This is an airfield control tower with one operating position (fig 3-2 and TM 11-5895-579-12). Provisions are included for an assistant controller to handle flight data functions. It may also be operated by two remote control consoles located within a 100-foot radius of the shelter.

(2) *Landing control central AN/TSQ-71A.* This is a shelterized TPN-18 radar with operating positions for two ground controlled approach (GCA) operators (fig 3-3 and TM 11-5895-474-12).

(3) *Landing control central AN/TSQ-72.* This landing control central (fig 3-4) provides control tower and GCA functions.

(4) *Nondirectional beacon AN/GRN-6 (TM 11-5825-202-12).*

(5) *Nondirectional beacon AN/TRN-25 (nondeployable within CONUS) (TM 11-5825-245-12).*

(6) *Nondirectional beacons AN/TRN-30(V1) and AN/TRN-30(V2).* Figure 3-5 shows the pathfinder nondirectional beacon AN/TRN-30(V1) and figure 3-6 shows the semifixed nondirectional beacon AN/TRN-30(V2).

(7) *AN/FSQ-75 consoles in AW-3 control tower cab.* This is a three-operating position control tower cab for semifixed major hub airfield operations (fig 3-7 and TM 11-5895-590-10).

(8) *GCA radar AN/TPN-18.* This radar is used in landing control central TSQ-71A and landing control central TSQ-72. It can be installed in prepared facilities but requires separate



Figure 3-5. Pathfinder nondirectional beacon AN/TRN-30(V1).

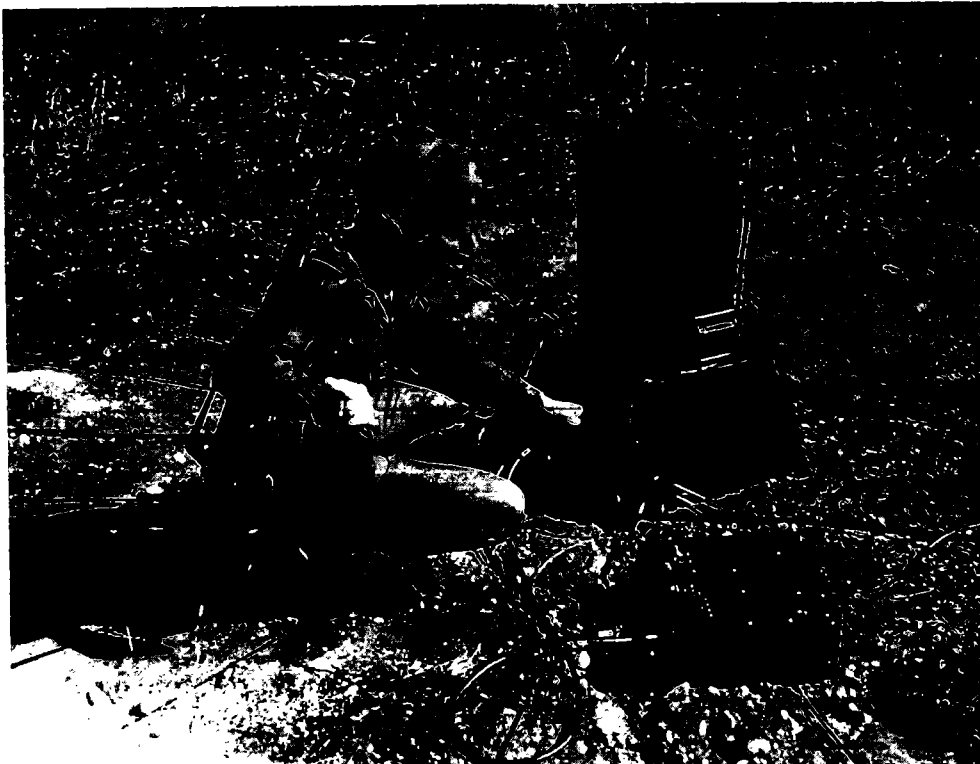


Figure 3-6. Semifixed nondirectional beacon AN/TRN-30(V2).

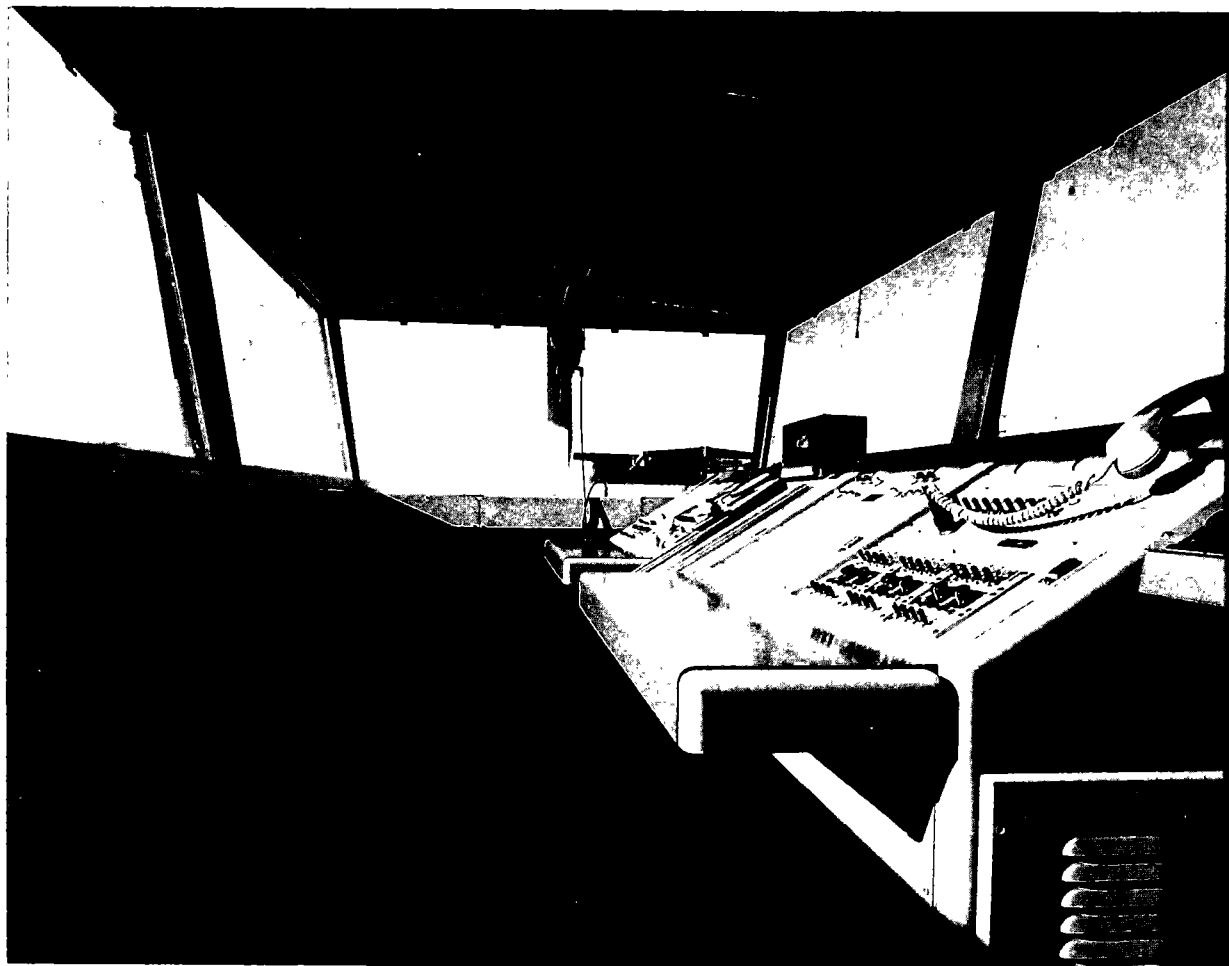


Figure 3-7. AN/FSQ-75 consoles in AW-3 control tower cab.

action to obtain auxiliary equipment, e.g., radios, wind instruments, and power (fig 3-8).

(9) *Interrogator set AN/TPX-44.* This interrogator set is used in conjunction with the AN/TPN-18 radar for control of aircraft. It identifies aircraft and reinforces radar target returns (fig 3-3 and TM 11-5895-468-12).

(10) *GCA radar AN/FPN-40.* This GCA radar requires prepared facility and auxiliary equipment and is used primarily at fixed Army airfields (fig 3-9 and TM 11-5840-293-12).

(11) *Radar system AN/FSQ-84.* This radar system consists of one AN/FPN-40 GCA radar and one AN/TPX-41 interrogator set (TM 11-5895-479-12).

b. Maintenance of ATC Equipment. The airfield operations officer must insure that the ATC maintenance section is performing its mission. The Army maintenance management system, as outlined in TM 38-750, provides guidance for the achievement of a sound maintenance system. If

available, technical assistance may be provided by a contract field service representative under the provisions of AR 700-4. Problems associated with air traffic control equipment are usually the result of inadequate training and/or supervision. This deficiency may result in deterioration of supply support. The technicians may fail to perform routine calibrations or to follow or establish preventive maintenance schedules.

3-7. Radio Frequency Assignment and Compatibility

a. Coordination Required. AR 95-9 covers radio frequency assignments with reference to AR 105-24 and AR 705-16. Requests for radio frequency assignments in CONUS will be forwarded to the appropriate CONUS Army area or MDW for action. Each CONUS Army area and MDW have a radio frequency coordinator who is responsible for all radio frequency assignments within his geographical area. Oversea requests are sub-

mitted in accordance with the regulation of the respective command.

b. Guidance for Frequencies Required. Appendix B of TB 95-1 provides guidance for the airfield operations officer regarding the frequencies required for operation of air traffic control facilities.

c. Reports on Electromagnetic Environmental Information. Electromagnetic environmental information for US military installations within CONUS is reported in accordance with AR 105-67. All AAF's have a responsibility for providing data in accordance with this regulation.

3-8. Air Traffic Control Procedures

Air traffic control procedures are used to stand-

ardize control of traffic on the ground and in the air in the airfield commanders area of responsibility. They expedite air traffic, provide separation between known aircraft and other hazards, and interface with FAA ATC functions.

a. Standard Procedures. FAA publication 7110.8 contains official procedures for air traffic control facilities and AR 95-9 contains the authority to establish air traffic control facilities. Every effort should be made to control air traffic using these procedures. Details of facility operations are contained in TM 95-200.

b. Special Procedures. Special procedures may be implemented by the responsible aviation officer for protection of air operations equipment and personnel. Recommendations to modify or expand

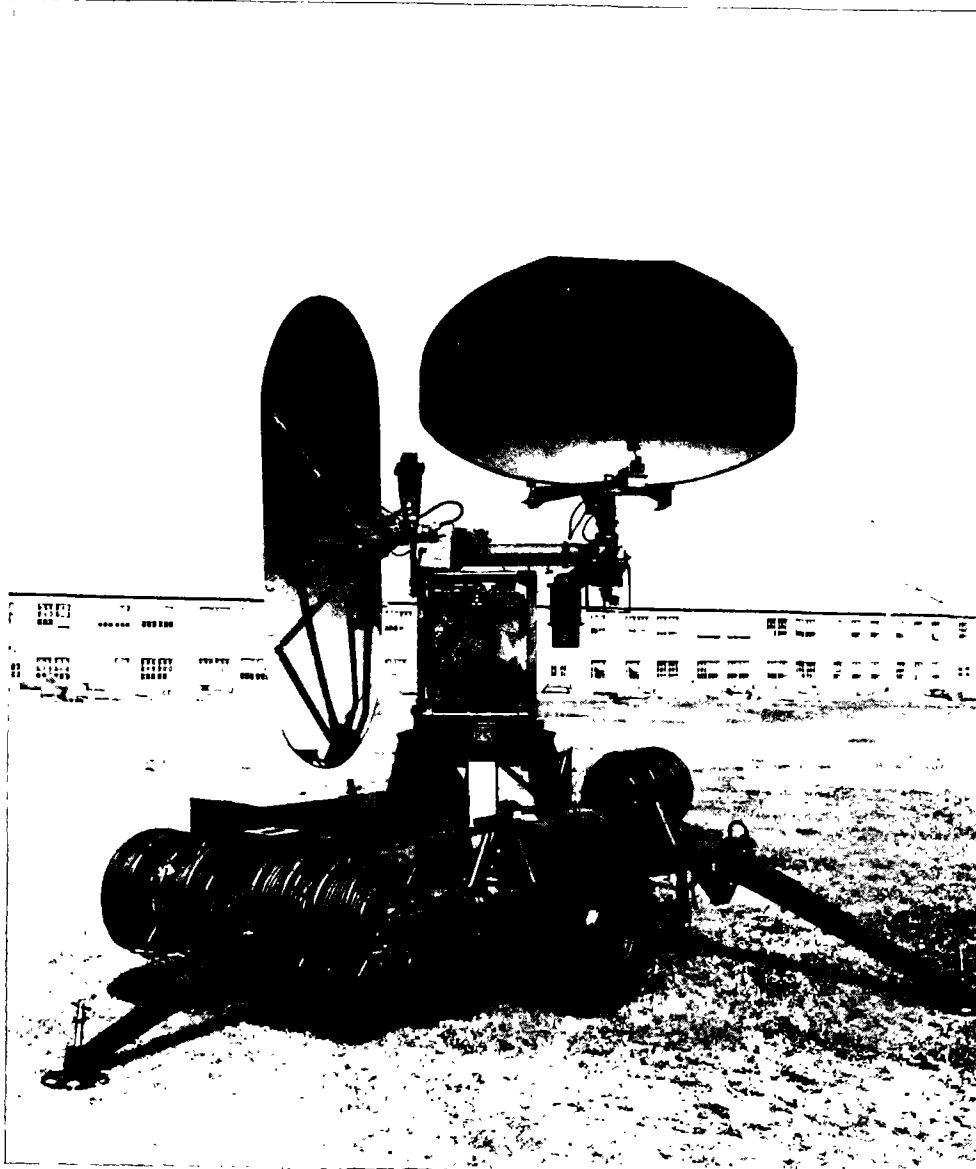


Figure 3-8. GCA radar AN/TPN-18.

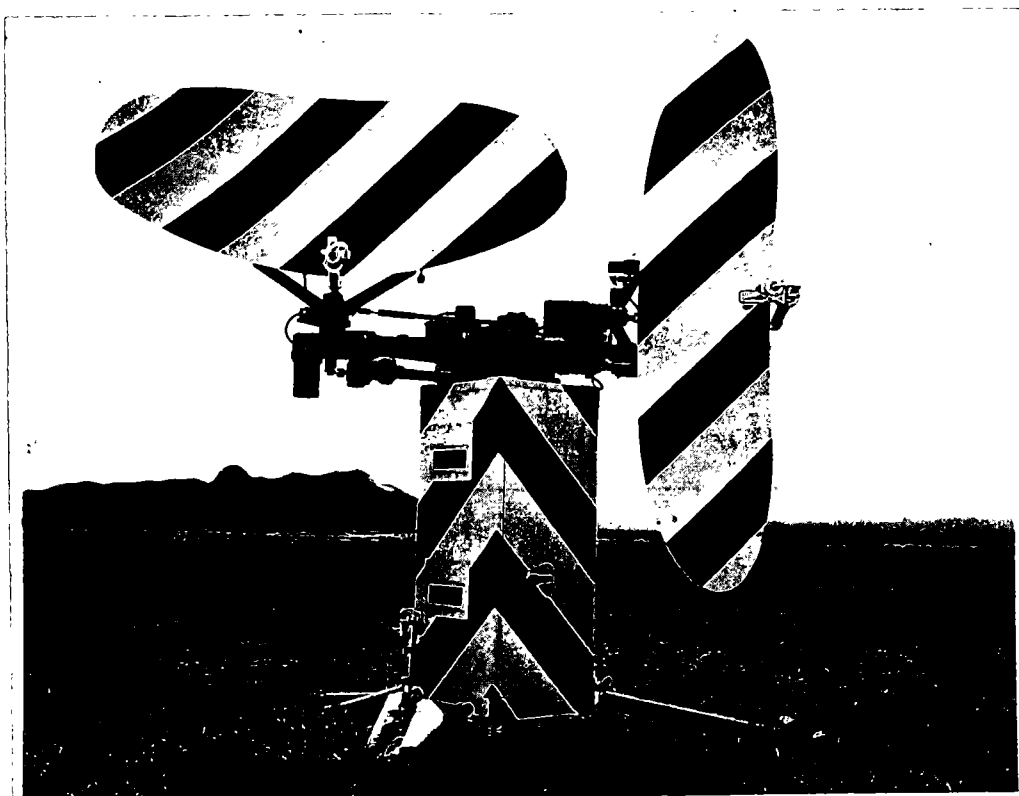


Figure 3-9. Radar set AN/FPN-40.

current procedures should be forwarded to the Director, USAASO.

3-9. Traffic Pattern

a. Establishment. Traffic patterns should be established in accordance with AR 95-1. When deviations are necessary, action should be taken to assure that the deviations are published in DOD FLIP for aviator information and planning.

b. Deviation. When safety of flight or an operational advantage exists, tower controllers may approve or require deviation from traffic patterns.

3-10. Local Flying Rules and Areas

Local flying rules and areas will be established by installation commanders having Army aircraft assigned, attached, or tenant to his command. AR 95-1 details coordination and other requirements which must be accomplished.

3-11. Arrival/Departure Procedures and Restrictions

a. Prearrival Procedures. It may be useful to develop special prearrival procedures to acquire advance information of fuel, maintenance, cargo, or passenger needs, for traffic or administrative

purposes. If restrictions or special procedures are developed, they should be published in DOD FLIP.

b. Approach Controls. In coordination with the FAA center serving the area, approach controls determine preferred arrival routes, altitudes, and in the case of radar facilities, hand-off points. These routes are developed in conjunction with departure routes and are contained in a letter of agreement between approach control facilities and ARTCC (AR 95-9, TM 95-200).

c. Standard Instrument Departures (SID). It may be advantageous to develop and publish Standard Instrument Departures. AR 95-9 contains criteria and procedures for the development of SID.

3-12. Special Use Airspace

a. Guidance. For detailed guidance in the establishment of special use airspace, see AR 95-9 and AR 95-50. USAASO is the Army point of contact on all matters pertaining to airspace.

b. Charting. Except for controlled firing areas, special use airspace is charted on visual and instrument en route navigational charts and described in Section IIB, Flight Information Publi-

cation. Special use airspace is shown on standard instrument approach and departure charts when an operational advantage may result or when it may help prevent violations of that airspace by aviators. A chart containing all special use airspace and low-level high-speed training routes within the local flying area will be posted in planning rooms to attract attention to the boundaries of such areas. These areas should be shown on all local flying area maps. Location of controlled firing areas can be obtained from the USAASO point of contact (DARR) at the FAA regional office.

3-13. Priority Movement of Military aircraft

a. Priority Handling Procedures. Key administrative and air traffic control personnel should know and understand procedures contained in FAA Publication 7610.4. These procedures are applicable for military aircraft requiring priority handling by the ATC system. An order of precedence has been established based on the nature of the mission.

b. Expeditious Handling. Expeditious handling will be afforded aircraft using the code name "FLYNET." These aircraft are transporting a special team to an accident involving nuclear, chemical, or biological material.

3-14. Helicopter Routes

Arriving and departing helicopter routes should be developed for each AAF for which a control zone has been designated or an airport traffic area exists. Use of these routes by VFR traffic will enhance their value when outlined in an operation letter for use under SVFR conditions. The following areas should be considered:

a. Identifiable Routes. Designated routes should be readily identifiable by prominent geographical features.

b. Fixed Wing Arrival and Departure Routes. Routes should not conflict with arrival and departure procedures established for fixed wing aircraft.

c. Low Altitudes. Altitudes lower than those authorized in AR 95-1 will not be required.

d. Separate Rotary Wing Traffic Patterns. At airfields which have a separate heliport and generate a sizeable amount of fixed wing traffic, consideration should be given to establishing separate

rotary wing traffic patterns. Rotary wing traffic patterns should be located on the side of the airfield which contains the heliport and opposite to the fixed wing traffic patterns. This may require establishing right hand traffic patterns for fixed wing aircraft.

3-15. Instrument Procedures

a. Criteria. Criteria for instrument approach procedures are contained in TM 11-2557-26 (FAA 8260.3), while AR 95-9 outlines the method for obtaining procedure development service. Advice and information is available from Headquarters, USAASO; USAASO Detachment; and USAASO's representatives assigned at the applicable FAA Regional Office, FAA Flight Inspection District Office, or FAA Flight Inspection Group.

b. NAVAID Facilities Available. It is not necessary to own a navigational aid in order to have a published instrument approach procedure. NAVAID facilities operated and owned by another agency may be used provided a letter of agreement exists between the using agency and the owner. Depending on the type of equipment, satisfactory minimums may be realized from aids located 10 or more miles from the airfield. It may not be necessary to add additional maintenance, personnel, and supply problems to the branch. Existing and programmed NAVAID facilities operated by other agencies (USAF, Navy, FAA) may be used.

c. Acceptance of Instrument Procedures by Host Countries. Many host countries in overseas areas comply with International Civil Aviation Organization (ICAO) rules and criteria. Usually, coordination with the host country aviation authority will result in their acceptance of instrument approach procedures developed in accordance with TM 11-2557-26 (FAA 8260.3). This acceptance results in the procedure being authorized for civil use, rather than being restricted for military use only.

3-16. Airspace Request and Procedures

a. Definitions and Request Procedures. Definitions and procedures used to request airspace actions are outlined in AR 95-50. Operation of an AAF involves primarily the use of the following:

(1) *Airport traffic areas* are automatically established around airfields with operating control towers.

(2) *Control zones* are intended to encompass the flight paths of aircraft flying under IFR, arriving and departing an airfield.

(3) *Transition areas* are established around airfields to contain the flight path of aircraft proceeding under IFR, which are arriving, departing, holding, or proceeding through the area.

(4) *Control area* is airspace so designated in order that separation may be provided aircraft operating in IFR weather conditions. IFR separation is not provided aircraft operating outside of controlled airspace.

b. *ICAO Rules Airspace*. AAF's operating under ICAO rules are concerned with the following types of airspace:

(1) *Aerodrome traffic zones* are designated areas around an airfield for the protection of VFR traffic. Generally, they are the same as the FAA airport traffic areas, except they are designated on an individual basis.

(2) *Control zones* are designated areas around an airfield for the protection of arriving and departing IFR traffic; generally, the same as FAA control zone, except an upper limit is specified.

(3) *Terminal control areas* are designated areas, normally established in the vicinity of one or more airfields. This airspace would be that required by an approach control facility.

(4) *Control areas* are similar to FAA definitions, except they may or may not have an upper limit.

c. *Tactical Airspace for Army Terminal Facilities*. The airspace required to effectively provide air traffic service for Army tactical units can be obtained by the delegation of airspace to Army terminal control facilities. Coordination with adjacent Army terminals can result in a series of contiguous terminal airspaces in which aircraft can be provided en route service when required. Maximum freedom of action is required for Army aviation resources in a tactical environment (FM 1-60). Therefore, only that part of the terminal delegated airspace essential for control of IFR aircraft should be designated controlled airspace.

3-17. Flight Inspections and Service Evaluation Flights

a. *Flight Inspections*. Flight inspection is that function performed on air navigational aids to determine the performance of those aids. TM 11-2557-25 (FAA 8200.5) prescribes standard-

ized procedures for all personnel charged with the flight inspection mission. Within CONUS, the FAA performs all flight inspections of NAVAID's used in the National Aviation System. Flight inspections of Army NAVAID's are obtained under the DA/FAA NAT-127 agreement, the provisions of which are contained in AR 95-9. Overseas, this mission may be the responsibility of the FAA, USAF, or host country. Flight inspections are used to—

(1) Evaluate proposed NAVAID site locations.

(2) Commission all air navigation facilities.

(3) Conduct regularly scheduled periodic inspections to determine the facility performance.

(4) Determine the facility performance or characteristics for special purposes.

b. *Service Evaluation Flights*. Service evaluation is the complete evaluation of all aspects of an air traffic facility to include controller techniques, procedures, phraseology, compliance with applicable regulations, and a thorough technical evaluation of equipment performance. Service evaluation flights may be conducted by units assigned to higher headquarters or by the operations officer using the checklist contained in TM 95-200.

3-18. Air Traffic Control Coordination

Air traffic control facilities are required to coordinate with many other units. To clearly outlined responsibilities and procedures, coordination requirements will be outlined in letters of agreement, operations letters, and facility memoranda (TM 95-200).

a. *Letters of Agreement*. Letters of agreement will be developed between—

(1) Control towers and another agency, when IFR service is provided by that agency.

(2) Army approach controls and agencies providing IFR air traffic service in areas over and adjacent to the Army designated area.

(3) Army GCA units and the agency providing approach control service, when that agency is other than an Army unit assigned to the parent airfield operations division.

(4) Control towers and Air Weather Service, when controllers are authorized to take limited visibility observations.

b. *Operations Letters*. Operations letters should be developed between—

(1) Army air traffic control facilities and tenant units when it is necessary to outline other than normal operating practices.

(2) Control tower and fire rescue units.

c. Facility SOP. Facility SOP will encompass all items requiring coordination between units under the operational control of the operations division. Appendix C contains a recommended SOP format.

3-19. Landline Communication

a. ATC Requirement. Air traffic control facilities require sole user direct landline communication. Requests for nontactical communications are submitted in accordance with AR 105-22. Restoration priorities are contained in DOD Directive 4605.2(C). It is desirable that each facility have a sole user circuit rather than sharing a single one. For example, an AAF with a VFR control tower and a GCA is provided IFR service by an FAA approach control facility. Both the control tower and GCA should have separate landlines into the FAA facility, since the GCA operator will normally coordinate with a different controller than that required by the tower. If it is necessary to multipoint one line, the tower circuit should be activated by a ring signal and the GCA termination should be into an open speaker for callup. Switchboard termination should allow the GCA controller to mute the speaker when switching to the operator's headset/microphone.

b. Landline Terminations. Landline terminations at air traffic control facilities should be kept to the absolute minimum. Commercial telephone numbers should not be published and should be issued only on a need-to-know basis. TM 95-200 provides additional guidance on landline termination, recording, and command post circuits.

3-20. Weather

a. Certified Observers. Control tower operators should be certified by Air Weather Service units to take visibility observations whenever the prevailing visibility at the usual point of observation is less than 4 miles. If the tower operator is a certified observer, the visibility reported by the control tower becomes the official airfield visibility at the moment of observation. The information is relayed to the weather unit as soon as possible. Since the observation may be transmitted directly to aviators, this procedure increases the operational flexibility of the AAF. If the tower opera-

tor is not a certified observer, the observation must be transmitted to an AWS observer for verification. With reduced visibility, small changes have an immediate impact on aircraft operations and the authorized ATC procedures which apply.

b. Observing and Reporting Visibility. Federal Meteorological Handbook No. 1, Surface Observations, is the basic source of instruction for taking and recording surface weather observations. For details on observing and reporting visibility, see chapter A6 of Federal Meteorological Handbook No. 1 and paragraph 11-7 of TM 1-300.

3-21. High Wind and Storm Procedures

All AAF's should prepare and maintain a detailed plan to be implemented whenever high wind warnings are received. That part of the plan pertaining to ATC should include, but not be limited to—

a. Protection of window glass and interiors by using prefabricated window covers. To prevent pressure equalization, building should not be made airtight.

b. Performance checks on backup power sources to insure efficient operation and that required fuel and oil are on hand.

c. Performance checks on radio and NAVAID antenna sites to insure guy wires are properly secured and equipment is firmly in place. Radar antennas should be removed when wind velocity is expected to exceed those listed in TM 11-5840-293-12 (90 knots for AN/FPN-40) and TM 11-5840-281-12 (100 knots for AN/TPN-18).

3-22. Aircraft and Vehicular Ground Traffic

a. Radio Communication. To insure safety of aircraft and vehicles on the airfield movement area, two-way radio communication is desirable for tower controllers. Before aircraft and vehicles proceed on the airfield aircraft movement area, the SOP should require tower clearance.

b. Vehicle Movement on the Runway. Vehicle movement on the runway should be held to the minimum required for runway inspection and maintenance and all vehicles should be marked (para 6-3d).

3-23. Fire and Rescue

a. Preaccident Positioning Plan. Preaccident positioning plans should be developed between the

ATC branch and the fire and rescue unit. Upon notification of an impending accident or emergency, rescue units will proceed to designated locations. Additional information will be relayed to the fire rescue units by radio as it becomes available to tower controllers. For details on fire and rescue procedures, including off airfield procedures, see AR 95-26. Appendix I of AR 95-5 contains guidance for listing responsible personnel/agencies on the primary and secondary crash alarm systems.

b. Emergency Communication System. The desired emergency communication system, as described in TM 5-315, includes—

- (1) Two-way communication between fire trucks, ambulance units, and the control tower.
- (2) Provisions for monitoring control tower and aircraft communications.
- (3) Direct emergency wire intercommunication between control tower, crash truck, and crash ambulance control stations.
- (4) Secondary crash wire system for notifying essential supporting personnel. This system should be installed at either the flight dispatch or fire/rescue facility.

3-24. Reports, Logs, and Forms

a. Recording Requirements. Much of what goes on in the ATC facilities is recorded in some form of a written record or on tape recorders for radio transmissions. Most of the requirements for recording activities at ATC facilities are contained in TM 95-200, AR 95-1, AR 95-9, and AR 95-37.

b. Forms for Maintenance Technicians. TM 38-750 contains instructions on the required forms to be completed by maintenance technicians. To identify and correct maintenance deficiencies, records must show complete information.

3-25. Air Traffic Activity

a. Reporting Procedure. AR 95-24 outlines the procedure for reporting airfield activity. TM

95-200 contains the requirements for recording air traffic at ATC facilities.

b. Traffic Activity Counts. Accurate traffic activity counts are essential since they have a direct impact on—

- (1) NAVAID authorizations.
- (2) Manning.
- (3) Airfield aviation facilities.

3-26. Flight Violations and Operational Hazard Reports (OHR)

a. Processing Alleged Flight Violations. Alleged flight violations are forwarded to Headquarters, USAF (AFIFS), Norton AFB, California, whenever the pilot or aircraft involved cannot be identified. Civil violations are processed by the FAA. AR 95-12 is a joint regulation that outlines procedures to be used by all military commands.

b. Operational Hazard Reports. Operational hazard reports, DA Form 2696, are submitted to identify inadequacies, deficiencies, or unsafe practices (AR 95-1). An OHR is not appropriate when action under ARs 95-12 or AR 385-40 has been taken.

c. SOP Procedures. To insure that pertinent information is recorded, the unit SOP should contain procedures and report formats for use by controller personnel. TM 95-200 contains information concerning reproduction, transcripts, and certification of record.

3-27. Security Control of Air Traffic and Air Navigation Aids (SCATANA)

a. Plan. SCATANA (AR 95-21) was prepared jointly by DOD, the Department of Transportation, and the Federal Communications Commission. The plan includes control of military and civil air traffic and air navigation aids.

b. Conditions. Air traffic controllers should be fully informed on the different SCATANA conditions that may occur and their duties which relate to these conditions.



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CHAPTER 4

FLIGHT DISPATCH BRANCH

4-1. General

The flight dispatch branch provides those services required by transient and assigned aviators to plan and file flight plans. The branch includes a chief and flight operations specialists.

4-2. Flight Dispatch Branch

a. Flight operations chief—

(1) Coordinates the activities of his branch under the supervision of the operations officer.

(2) Supervises and trains flight operations specialists in all assigned duties.

(3) Provides flight planning service, i.e., current publications, maps and charts, NOTAM board, and current weight and balance forms on each assigned class II aircraft.

(4) Schedules flight operations specialists for tours of duty and insures adequate coverage during peak flying periods.

(5) Insures that the branch SOP provides for immediate notification of the operations officer on all accidents or impending emergencies.

b. Flight operations specialist—

(1) Receives, reviews, and processes flight plans and secures the signature of the clearance authority on all flights.

(2) Transmits flight plan data to the FAA flight service station and, if IFR, to the FAA ARTCC and/or approach control serving his airfield.

(3) Advises the local control tower on all proposed departures and arrivals.

(4) Notifies the operations officer whenever an arrival flight is 30 minutes overdue.

(5) Keeps airfield services informed on ETA and ETD so that the aircraft can be met and fire guard provided.

(6) Advises the operations officer of arriving and departing VIP's so that proper honors can be extended.

(7) Disseminates all severe weather warn-

ings to persons or organizations outlined in the SOP.

4-3. Personnel

Flight operations coordinators are categorized in MOS 71P. If civilian flight dispatchers are used, the civil service classification is GS-2152, Air Traffic Control Specialist (Station option).

4-4. Flight Dispatch and Communication Center

Flight dispatch and communication center personnel—

a. Maintain a flight information counter service for aviators and crewmembers to provide consultation and advisory assistance for obtaining flight information materials, weather information, processing flight plans, transportation, fuel, and aircraft maintenance. Individuals requesting travel by DOD aircraft must meet criteria established in DOD Directive 4515.13-R.

b. Display and provide information relating to overall safety procedures and their application to airfield operations. The display should include emergency procedures to be taken in response to aircraft accidents and airborne in-flight emergencies for transient and local aircraft using the airfield.

4-5. Weather

a. *Airfield Status Indicator.* Each AAF having a weather observation capability should have an airfield status indicator installed at the flight dispatch counter. TB 95-1 outlines the standard installation of this equipment which is part of the AN/FSW-8 communication equipment.

b. *Obtaining Weather Observations.* When weather observation facilities are not furnished at the airfield, a telephone should be provided at the operations counter for aviators' convenience in placing calls to the nearest AWS detachment. Since weather briefings may also be obtained

from FAA flight service stations, consideration should be given to the installation of a sole user landline between the flight dispatch counter and the FAA tie-in FSS. Operations personnel would use this line to pass and receive NOTAM information, weather warnings, and flight plan information (para 4-7).

4-6. Flight Service

a. Military Flight Plans. FAA flight service stations accept military flight plans from any source, including collect telephone calls. A flight notification message is sent to the destination tie-in station and includes the following:

- (1) Type flight plan.
- (2) Aircraft identification.
- (3) Type aircraft.
- (4) Departure point.
- (5) Destination.
- (6) ETA.
- (7) Remarks.

b. Changes in Flight Plans. Whenever an en route aircraft changes his estimated time of arrival (ETA), changes from VFR to IFR, or requests other data be forwarded, the destination station will be notified. When a change in destination is involved, a revised flight notification message is sent to the departure point and to the original and new destinations.

c. Approval to Land Civil Aircraft at Military Airfield. Flight service stations apply military handling procedures to civil aircraft filed for military airfields. It is the aviator's responsibility to obtain military approval to land at the airfield.

d. Overdue Aircraft Action. Attempts to locate overdue aircraft are initiated by the destination tie-in flight service station in accordance with procedures contained in FAA Flight Services Handbook 7110.10. The FAA is responsible for initiating overdue action on all flights for which flight plans are entered into the FAA system. Military operations offices are responsible for initiating overdue action on all other military flights.

(1) The destination tie-in flight service station initiates a preliminary communications search 30 minutes after the last known ETA of a flight. If this search fails to locate the aircraft, the signal "QALQ" is transmitted to departure station who, in turn, checks locally for any information about the aircraft, and takes the following action—

(a) If the aircraft is located, the departure station notifies the destination station.

(b) If the departure station is unable to obtain additional information, a message is transmitted to the destination station containing all flight plan information not previously sent. Any verbal or written remarks made by the pilot which may be pertinent to the search are included.

(2) If negative information is obtained, the destination station transmits a numbered information request (INREQ) message to the departure station, destination Rescue Coordination Center (RCC) tie-in station, and all stations along the route of flight. These stations will check records; make inquiries at local airports, control towers, and radar facilities; and reply to the INREQ within 30 minutes.

(3) If the INREQ turns up no additional information or if the aircraft has not been located within one and one-half hours (2 hours for no-flight plan aircraft), whichever occurs first, an alert notice (ALNOT) message is transmitted by the destination station which expands the search effort.

(4) If the above procedure fails to locate the overdue aircraft, the Rescue Coordination Center (RCC) is notified.

e. FAA Flight Service Interphone Communication Procedures. AR 95-11 explains the FAA flight service station interphone procedures and operating rules for associated Army airfield operations offices.

4-7. Landline and Communication Requirements

a. Developing Standing Operating Procedures. Airfield operations communication centers should use TM 11-490 when developing standing operating procedures. Policy and procedural guidance for communications center operations and required reference publications are contained in AR 105-17.

b. MINIMIZE Restrictions. Detailed instructions regarding the authority to issue the order and for communications centers operating under MINIMIZE restrictions are contained in ACP 121, Allied Communications Procedures General, US Supplement No. 1. AR 105-34 describes the meaning, authority, manner, prerequisites, and cancellation of MINIMIZE.

c. Lease of Communications Circuits, Equipment, and Services. Airfield operations usually require numerous means of communication. Some of these may be long distance leased communication circuits and associated equipment and services (AR 105-22). Local leased communication circuits, equipment, and services are handled in accordance with AR 105-23.

d. Communication Security (COMSEC). COMSEC policy and guidance for the signal communications systems are contained in Allied Communication Publication 122 and (C)FM 32-5. Instructions in the proper use and safeguarding of COMSEC equipment and material are contained in AR 380-40 and AR 380-41.

e. Automatic Voice Network. Use of the defense communications system automatic voice network (AUTOVON) is covered in AR 105-12.

4-8. Local Flying Area

a. Designated Areas. Local flying areas are required at installations having assigned aircraft (AR 95-1). Whenever possible, the area designated should be located outside the airport traffic area and/or control zone. Transition between the airfield and the local flying area should be via designated corridors over easily identifiable natural or manmade features.

b. Maps. In addition to displaying the above information in the flight planning room, the flight operations specialist should have handouts for the local flying area available at the counter for aviators filing local flight plans (abbreviated DD Form 175).

4-9. Operations Clock

a. Each airfield operations flight planning room should have an accurate clock indicating Greenwich Mean Time at the flight dispatch counter. The clock must be of sufficient size to be easily read by aviators.

b. Unless the clock is of the self-correcting type, it should be checked daily at approximately the same time against the clock used in the control tower.

4-10. Aircraft Requiring Special Handling

a. Aircraft requiring special handling are listed in paragraph 2-13. The flight dispatch branch SOP should contain detailed guidance on the

actions to be taken for each category of special handling.

b. The procedures employed when VIP's are arriving or departing an airfield depend on the guidance received from the installation commander. The flight dispatch branch should maintain a current list of names and their telephone numbers for notification purposes.

4-11. High Winds and Storm Procedures

Flight dispatch personnel should perform those applicable functions described in paragraph 3-21. In addition, a notification roster should be maintained in order to advise—

- a.* Airfield operations officer.
- b.* Control tower.
- c.* Airfield services branch.
- d.* Terminal radar approach control (TRACON) facility and GCA facilities.
- e.* Post engineers.
- f.* Flight scheduling.
- g.* Military police.
- h.* Tenant aviation units.

4-12. Vehicle Procedures

A vehicle and driver should be available to flight dispatch either through the airfield alert branch or installation motor pool. The vehicle is required to—

- a.* Transport operations personnel on official business.
- b.* Transport transient personnel to and from the main post.
- c.* Perform other duties as directed.

4-13. Ground Procedural Violations

a. Ground procedural violations include items such as improper operation of vehicles on the ramp, taxiways, or runways; unauthorized personnel on the runway; leaving work stands or auxiliary power units in a location which might result in an accident; and failure of vehicle drivers or pedestrians to observe light signals from the control tower.

b. The flight dispatch branch should accept reported violations for the division. The airfield op-

erations officer should develop procedures to insure that remedial action is taken.

4-14. Operational Hazard Reports (OHR)

a. The flight dispatch branch insures that adequate supplies of the Operational Hazard Report, DA Form 2696, are placed in convenient locations for use by all aviation personnel.

b. The OHR will be prominently displayed in the flight planning room with sufficient instruction as to its use.

4-15. Reports—Logs

Dispatch personnel maintain logs and records as required by the airfield operations officer. Some of these are—

a. *Operation Logs.* AR 95-1 contains items which should be included in this locally produced form.

b. *Flight Information Board.* Used for posting information on inbound and outbound flights. Space should be available for listing serial number and type of aircraft, name of aviator, destination, point of departure, actual time of departure, and estimated time of arrival.

c. *Flight Dispatch Log.* Locally prepared form for recording activities of the on-duty flight operations specialist.

4-16. Lounge Facilities

a. When lounge facilities are provided in the area of the dispatch counter, dispatch personnel should be responsible for insuring general neatness of the area during their shift of duty.

b. Some interesting and light reading material for the lounge can be found in DA Pam 95-2, DA Pam 95-3, DA Pam 95-6, and DA Pam 95-8.

4-17. Flight Clearances and Authority

Authorization for flight of Army aircraft is contained in AR 95-1 which also explains commanders' and aviators' clearance authorities, responsibilities, and qualification criteria. Restrictions and limitations on the use of Army aircraft to carry passengers and cargo are contained in AR 95-1 and DOD Directive 4515.13-R.

4-18. Fire and Rescue

Whenever information becomes available that a

fire or crash has occurred, it will be passed to the fire station, control tower, and airfield services branch. After the initial notification, the control tower should coordinate future activities concerning the incident if it involves a fire or an aircraft accident on the airfield.

4-19. SCATANA

The control tower or approach control facility receives instructions to implement SCATANA from the ARTCC serving the area. The tower, in turn, takes action as indicated on the facility's SCATANA action form. Preplanned procedures may require flight dispatch to take action to control certain air navigation aids as designated by FAA ARTCC, if not controlled by a control tower (i.e., to turn the air navigation aid off or on, as required by FAA ARTCC). Ground-ground radios used for security purposes may continue in operation provided geographical call signs are not used. Actions are simulated when "SCATANA Test" messages are received.

4-20. Flight Planning Room

a. *Responsibilities.* The airfield operations officer is responsible for the establishment and operation of a flight planning room. The room is under the direct supervision of the flight dispatch chief who is responsible for the general appearance, efficient administration, and its operation.

b. *Provisions.* The flight planning room shall provide current aeronautical information and facilities to permit local and visiting aircrews to complete a self-briefing and preflight planning, as appropriate. The flight room is sited, organized, and equipped as follows:

(1) The room should be conveniently located with respect to the operations room and weather office. Its location should be clearly indicated by direction indicators.

(2) The appearance of the room shall be neat, clean, and orderly at all times. Provisions for removal and disposal of all trash and obsolete material should be established and maintained. Assigned personnel will maintain a neat and professional appearance at all times.

c. *Flight Plan Preparation.* The room should provide adequate accommodations for preparing flight plans in reasonable comfort. Operations specialists should be available during the hours of operation for briefing pilots on departure and ar-

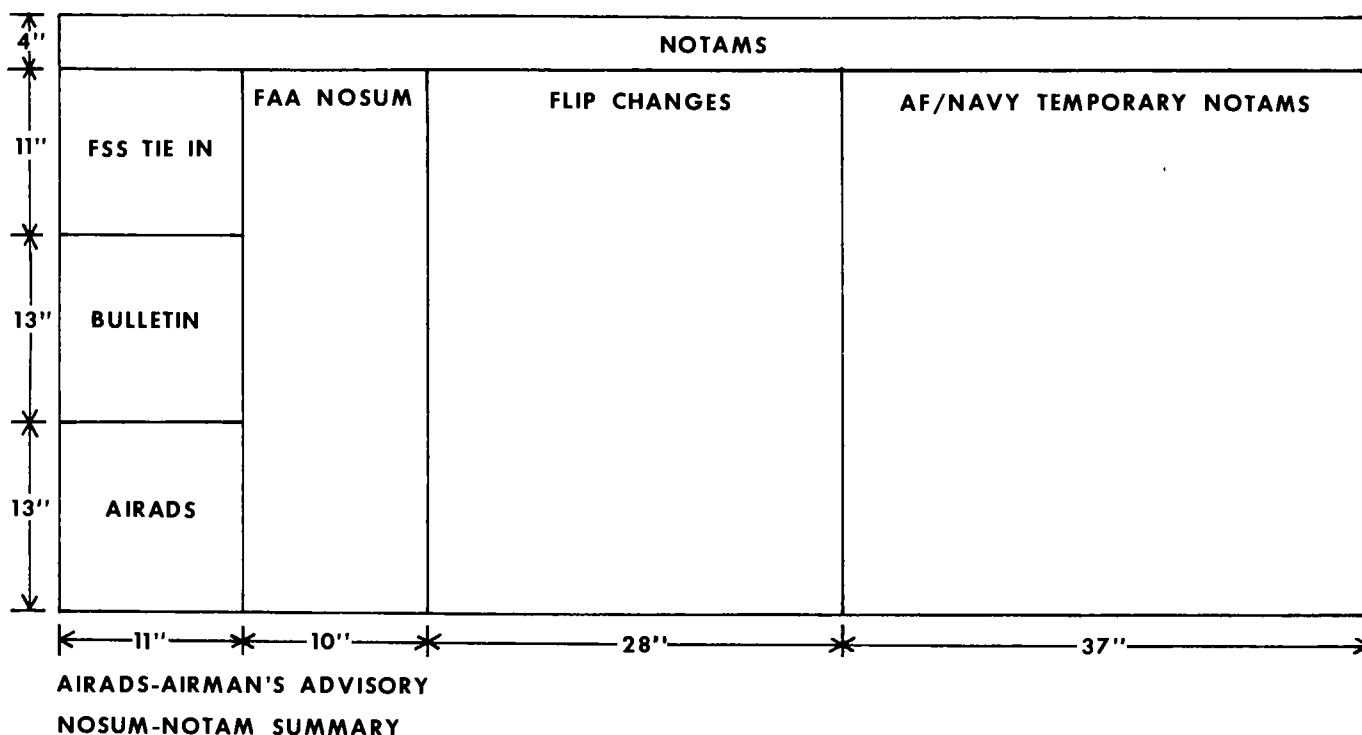


Figure 4-1. Army NOTAM board (CONUS).

rival procedures and other information relative to the area. The following should be provided:

(1) A base telephone and landlines for authorized aircrew use.

(2) An accurate clock indicating Greenwich Mean Time.

(3) Plotting tables with lighting arrangements.

(4) Suitable plotting and computing instruments.

(5) Reference files and storage space for aeronautical charts, maps, publications, and forms required by aircrews.

(6) Wall space for display of planning charts and other aeronautical information pertinent to the airfield and area of operation.

(7) Bulletin boards, and other sources of reference material, containing only authorized pertinent flight information data.

(8) NOTAM display appropriate to the geographical location and clearing responsibilities of the airfield.

(9) Flight crew information file.

(10) Weather advisory bulletin board.

(11) Operators -10 manuals for all types of aircraft normally using the airfield. These manuals are for use by aviators and operations per-

sonnel (may be maintained at the flight dispatch counter).

4-21. Flight Plans

a. Review. The operations specialist reviews flight plans to insure accuracy and completeness. He insures that the weather briefing has been included and that the weight and balance entry is complete.

b. Distribution. Proposed flight plans are forwarded to the control tower and the appropriate flight service station serving the airfield. If IFR flight is proposed, the flight plan is also forwarded to the air route traffic control center (ARTCC) and, if required, to the facility providing approach control service for the airfield. Local flight plans are passed to the control tower.

4-22. Weight and Balance

a. Procedures. The procedures to be followed when filing a military flight plan or an FAA/ICAO flight plan are specified in AR 95-16. General information for the control of weight and balance of Army aircraft is contained in TM 55-405-9. Reference should be made to the appropriate manual for the aircraft concerned for specific data.

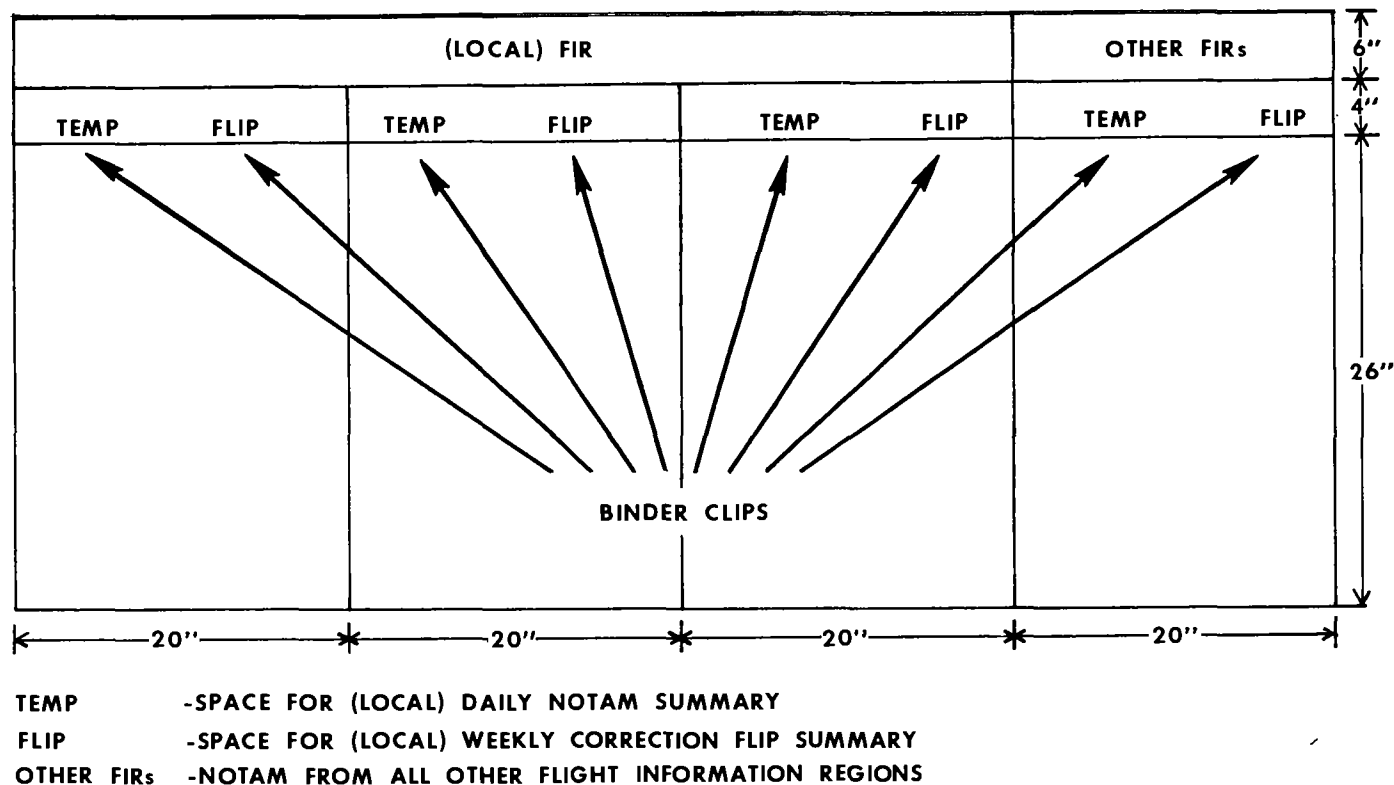


Figure 4-2. Army NOTAM board (overseas).

b. *Weight and Balance Clearance Form, DD Form 365F.* The original copy of DD Form 365F should be retained for a period of 90 days in the flight dispatch section for all locally based aircraft. The duplicate copy must be kept in the aircraft for the duration of the flight (TM 55-405-9).

4-23. Notice to Airmen (NOTAM) Display

a. *Responsibility.* The airfield commander is responsible for obtaining NOTAM advisory service and supervision in establishing effective procedures for controlling and monitoring NOTAM's that affect the operation of his airfield. He designates a representative, usually the flight dispatch chief, and delegates to him the authority and responsibility for the NOTAM display (fig 4-1 or 4-2).

b. *Display Material.* The NOTAM bulletin board shall contain only authorized material suitable to the needs of the airfield and its geographical area of responsibility. NOTAM material shall be displayed in a neat and orderly manner using clear, concise, plain language that will easily convey the information to aircrews.

c. *Airfield Conditions.* The NOTAM display

should contain current and accurate information on the status, establishment of, condition of, or change to airfield conditions. It should also include timely information on aeronautical navigation facilities, services, procedures, or hazards. Obsolete material of no value to aviators shall not be displayed.

d. *Correct Information Displayed.* Displayed NOTAM information shall be kept current by constant review and by immediately posting information and cancellations received. When an inaccuracy is noted on a NOTAM pertaining to the airfield, initiate action to cancel the NOTAM and immediately re-issue the correct information.

e. *Display Procedure.* All AAF's shall have a central NOTAM display board designed in accordance with figure 4-1 for CONUS installations, or figure 4-2 for oversea areas. The display must be in accordance with the following:

(1) The display shall be mounted on the wall in the flight planning room.

(2) A hard smooth surface material should be used for display backing in order that ink corrections may be made on the NOTAM.

(3) All rulings on the display are made in black and all lettering is made in red.

(4) The top center of each column should have a springloaded clip to hold the NOTAM and summary in place.

(5) NOTAM summary sheets are posted in the appropriate alphabetical column; if more than one sheet in a column is necessary, the sheets should be staggered to make the base names visible.

4-24. Flight Information Publications (FLIP)

AR 95-14 contains instructions for requisitioning some of the flight information documents recommended in appendix B. Each new addition of a flight information publication or chart that affects the operation of the airfield must be checked for accuracy and corrections submitted for publication.

4-25. Special Use Airspace

Operations specialists receiving flight plans should insure that aviators are cognizant of restrictions and hazards concerning special use airspace along the proposed route of flight. Local restrictions, hazards, or items affecting the normal operations of aircraft should also be mentioned, i.e., location of active snow removal equipment, helicopters conducting training, or bird activity.

4-26. Low-Level Routes

Operations specialists will post current low-level routes such as "Oil Burner," and "Heavy Wagon" on the Aeronautical Planning Chart in the flight planning room. Current Oil Burner activity is available from the FAA ARTCC. Heavy Wagon information is available from Flight Service Stations.

4-27. Flight Crew Information File

a. The flight dispatch chief is responsible for the supervision and establishment of an information file providing flight crews, transient and local, with complete and current pertinent aeronautical information and publications appropriate to the area. Those airfields having outlying landing areas might wish to develop a file containing photographs and other data on these installations. He should designate a representative, with delegation of authority and responsibility, for the maintenance of the flight crew information file. Appendix B lists flight information publications and aeronautical charts.

b. The flight information files shall be located in the flight planning room to permit regular and visiting aircrews to complete a self-briefing and preflight planning specific to their needs and flying mission and to the requirements of the local geographical area. The files should be maintained and arranged in looseleaf binders, labeled as to content, and kept in a bookcase or rack, or laid out on an open counter for quick and ready reference. The following should be included:

(1) Applicable airfield flying regulations and airfield plan map.

(2) Applicable Army regulations on operations, flying, emergency procedures, and flight safety.

(3) Applicable flight manuals and pertinent DOD FLIP products as indicated in AR 95-14 and the DOD Catalog of Aeronautical Charts and Flight Information Publications appropriate to the area of air operational concern.

(4) Charts relating to: navigation, general planning, weather plotting, special air operations, topography, regional geographic maps, and local aeronautical charts.

(5) Aeronautical charts giving details of local flying areas, navigational aids, radial and bearing checkpoints, traffic pattern diagrams, special use airspace, and a base master plan showing terrain features and hazards to flight off both ends of the primary runway.

(6) The following forms: Military Flight Plans (DD Forms 175 and 1801), Civil Flight Plans (FAA Forms 7233-1 and 7233-4 obtained from tie-in flight service stations), Flight Logs (DA Form 2283), and Weather (DD Forms 175-1).

(7) Foreign Clearance Guide (Unclassified). The classified section should be safeguarded in accordance with AR 380-5.

(8) International civil aviation organization (ICAO) annexes and documents. These shall include only those ICAO publications needed for mission accomplishment pertinent to the area of operations.

(9) Pertinent US Army technical documents and Federal Aviation Administration publications.

(10) Federal Aviation Regulations (FAR) pertinent to the aviation mission.

(11) TB AVN 1-series, Weekly Army Aviation Flight Information Bulletin.

(12) Other air operational data, as appropriate.

c. A card file shall be maintained indicating

that assigned aviators and crewmembers are aware of the latest and most current information posted in the flight information file before their participation in flight operations. The file will also indicate that the aviator has reviewed each posted change annually.

CHAPTER 5

AIRFIELD SERVICE BRANCH

5-1. General

The airfield service branch is responsible for ground handling and servicing of aircraft, inspection and general police of the airfield and airfield facilities, and operation of vehicles organic to the branch. The branch includes a chief, shift supervisors, aircraft servicemen, and petroleum storage specialists.

5-2. Airfield Service Branch

a. Branch chief—

(1) Is responsible to the operations officer for the proper operation of the branch.

(2) Supervises all activities assigned to the branch and prepares an SOP which delineates responsibilities to support these activities.

(3) Insures that all personnel are properly instructed in their assigned duties and that on-the-job and proficiency training is conducted.

(4) Assigns personnel and insures that duty rosters and performance records are maintained.

(5) Conducts a daily inspection of the airfield to include runways and taxiways for maintenance and police.

b. Shift supervisor—

(1) Conducts an inspection of the airfield at least once during his shift, to include runways and taxiways, for maintenance and police.

(2) Supervises and trains assigned personnel in their duties.

(3) Coordinates with other branches concerning VIP, transient and local aircraft, transportation requirements, and airfield condition.

c. Aircraft serviceman (MOS 67 series)—

(1) Provides and operates vehicles as required, and performs operator maintenance in accordance with technical manuals.

(2) Provides refueling and other related services for all assigned and transient aircraft. Insures that transient aviators complete aviation fuel and oil request (DD Form 1348).

(3) Provides housekeeping services.

(4) Stands fire guard for all aircraft starting.

d. Petroleum storage specialist (MOS 76W)—

(1) Receives, stores, and inspects all petroleum products delivered to the storage area.

(2) Insures that adequate supplies of aviation fuels, oils, and lubricants are on hand to meet current and emergency operating requirements.

(3) Conducts a monthly inventory of POL products and submits a report of this inventory to the supply officer.

(4) Performs first and second echelon maintenance on all lines, tanks, pumps, and valves in the POL storage area.

5-3. Refueling-Servicing

a. *Aircraft Refueling Schedule.* Aircraft scheduling furnishes a copy of the daily flight schedule to the airfield service branch. Aircraft refueling will be accomplished according to this schedule.

(1) The refueler enters in the aircraft log book, DA Form 2408-13, and the Daily Issues of Petroleum Products, DA Form 3643, the quantity of fuel and oil issued. The refueler certifies the accuracy of the entries by his signature.

(2) Transient Army aircraft use US Army Avfuels Identaplate (USAPC Form 25) for purchase of fuel at military or contract installations. The plate is returned to the aircraft log book along with the delivery/issue purchase slip (DD Form 1627) which has been signed by the aviator and refueler. Instructions for obtaining forms and imprinter are contained in AR 703-1.

b. *Tanker Resupply Procedures.* Procedures establishing tanker resupply at the POL storage area should include the following:

(1) Quantity of fuel remaining in the tanker should be determined prior to taking on fuel. A calibrated dipstick is suitable for this task. The quantity put into a tanker is entered on DA Form 3643 and certified by the signature of the petroleum storage specialist.

(2) The shift supervisor should determine the quantity of fuel remaining in each tanker at the end of the workday and transfer this amount to the new DA Form 3643 to be used for the next 24-hour period.

c. Checking Forms. The shift supervisor checks DD Form 1348 and DA Form 3643 for accuracy and completeness before forwarding to supply.

d. Protection of Fuel Storage Facilities. On some AAF's, the POL storage area may be assigned to the airfield operations officer. Each installation commander is responsible for construction for protection of petroleum installations and related facilities from sabotage and enemy action. Details for protection of fuel storage facilities are contained in AR 415-22.

e. Maintenance and Repair Responsibilities. AR 420-56 prescribes policy and responsibility for maintenance and repair of permanently installed petroleum storage, distribution, and dispensing systems.

(1) The using organization is responsible for preventive and minor maintenance and operation of facilities. Procedures for personnel concerned with organizational maintenance of tank vehicles and storage areas are contained in TM 10-1109. Safe practices and safety precautions are in TM 5-678 and TM 10-1109.

(2) The Post Engineer is responsible for other maintenance and for providing supplies and material to the user for the accomplishment of preventive minor maintenance.

f. Ground Handling and Servicing Equipment. TM 55-405-10 contains pictorial displays or sketches of ground handling and servicing equipment used at Army airfields. A functional and technical description and Federal Stock Number (FSN) are furnished for each item. Type classification, manufacturer's name, and part number are listed for some items.

g. Marking of POL Vehicles and Products. Details for marking of POL vehicles and products are contained in TM 10-1113.

h. Petroleum Handling Equipment Procedures. Procedures concerning inspection of tankers, strainers and screens, hoses and nozzles, fuel sampling, and filter differential checks are contained in TM 10-1101 and TM 10-1113.

i. Aircraft Defueling Procedures. Aircraft defueling procedures are contained in TM 10-1101 and TM 10-1113.

5-4. Transient Maintenance Services

a. Transient Aircraft Assistance. When transient aircraft develop trouble at an installation, they should be assisted in accordance with the installation maintenance capability. When classifying damage to aircraft, refer to TM 38-750.

b. Servicing and Maintenance Procedures. Procedures for servicing and maintenance of civil and foreign aircraft are outlined in AR 210-95.

5-5. Aircraft Parking and Taxiing

a. Ground Operation of Aircraft by Nonaviator Personnel. An on-the-job training program should be developed for all aircraft servicemen. AR 95-1 describes the procedures to qualify nonaviator personnel for ground operation of aircraft.

b. Codes. Flight plan information will include codes for servicing and for control of passengers and/or cargo. The flight dispatch section notifies the airfield service branch of the filed servicing code and any pertinent remarks concerning transient aircraft.

c. Parking Area Design. Criteria for the design of parking areas are contained in TM 5-803-4. Consideration is given to parking requirements for both airplanes and helicopters. Tiedown design and installation for mass parking areas are contained in TM 5-823-4. AFM 86-4 is used for design of parking areas when Air Force aircraft are authorized parking aprons at AAF's.

d. Hand and Light Signals. When directing aircraft movements on the ground, aircraft service personnel should use hand and light signals contained in FM 21-60.

e. Ground Handling of Float and Ski Equipped Aircraft. Ground handling characteristics of float and ski equipped aircraft are covered in TM 1-235. The manual covers items such as parking float-equipped aircraft on solid surfaces and how to free skis which have become frozen to the surface.

f. Prevention and Removal of Frost, Snow, and Ice Accumulation. Aircraft parked under sub-freezing conditions are subject to frost, snow, and ice accumulation. The procedures to prevent and to remove this accumulation are contained in TM 55-410.

g. Servicing Army Aircraft Under Extreme Environmental Conditions. General information on the procedures used in maintaining, servicing,

and ground handling of Army aircraft under extreme environmental conditions is contained in TM 55-410. For detailed information, refer to the technical manual for the particular aircraft.

5-6. Vehicular Procedures

a. Responsibilities. Vehicle dispatch, performance of operator maintenance, and maintaining motor vehicle supplies, are responsibilities of the shift supervisor. Whenever additional maintenance is required, he should coordinate with the responsible motor pool.

b. Military Driver's License. All airfield service branch drivers should possess the appropriate military driver's license in addition to the special authority to operate on the aircraft movement area (para 6-3).

c. Fire Prevention Methods. Operation of vehicles in the vicinity of the POL areas and aircraft refueling operations should be closely supervised. Sparks from the exhaust systems of these vehicles create a hazardous situation. TM 10-1101 describes the use of spark arresters for internal combustion engines. It also contains information on ground rods, identification of equipment, standards, and use of refueling tank vehicles. Requirement for fuel testing is also included. The procedure for the actual testing is contained in TM 10-1105. AR 385-10 encourages use of standards established by recognized authorities, such as Federal Safety Council, Interstate Commerce Commission, and the National Board of Fire Underwriters. Post Engineers can answer questions concerning standards for fire prevention.

5-7. Ground Support Equipment

Other equipment besides vehicles are required by the airfield service branch and are authorized on either TDA or TOE. Any item which is required and can be justified can usually be obtained for the airfield.

a. Snow Removal Equipment. Snow removal equipment may be required. For details on FWD Model S-349-V snow removal equipment, see TM 5-3825-213-10.

b. Miscellaneous Ground Support Items. The following items may also be applicable—

- (1) Forklift.
- (2) Goggles.
- (3) Decontamination equipment.
- (4) Wristwatches.

- (5) Flashlights.
- (6) Auxiliary power units.
- (7) Electrical wands.
- (8) Fuel contamination detector.
- (9) Intraoffice communication.
- (10) Magnetic sweeper.
- (11) Radio equipment for alert vehicles.
- (12) Runway and taxiway sweeper.

c. Preventive Maintenance Procedures. Criteria and responsibilities for initiating and accomplishing preventive maintenance programs for maintenance and service equipment utility plants and systems are found in AR 420-22. Preventive maintenance practices, procedures, and services are explained in TM 5-600 series. Good preventive maintenance procedures enhance efficient operations.

d. Standard Inspection and Maintenance Procedures. Standard inspection and maintenance procedures for auxiliary power units, maintenance work stands, portable air compressors, aircraft jacks, and other aviation ground support equipment are contained in TM 55-1500-204-25/1.

5-8. Airfield Marking and Lighting

The airfield service branch should maintain continuous vigilance on the condition of airfield marking and lighting. Marking of runways is a responsibility of the engineers. However, marking of snow-covered runways may be the responsibility of the operations officer. TM 5-811-5 contains criteria for marking of displaced runway thresholds and for runway, taxiway, and obstruction lighting.

5-9. Facilities Maintenance

a. Procedures. The airfield service branch is normally required to perform maintenance of buildings and grounds to include—

- (1) Housekeeping of the grounds around the operations building and parking areas.
- (2) Cleaning fuel sample bottles.
- (3) Checking fire extinguishers for broken seals and replacing as necessary.
- (4) Inspecting and replacing tiedown ropes.

b. Plan. A plan should be established for the periodic sweeping of runways, taxiways, and ramp areas.

5-10. Fire and Rescue

a. Transportation to and from Accident Site. In the event of a fire or crash on the airfield, the

branch should furnish a vehicle for transporting the operations officer. A second vehicle should be available to transport other authorized personnel to and from the site of the accident.

b. Guarding Crash Site. Airfield service personnel may be used as guards to keep unauthorized personnel from the crash site until relieved by the Provost Marshal.

c. Removal of Wreckage. Aircraft wreckage is not moved, except to remove injured personnel, until released by the President of the Accident Investigation Board.

5-11. Protective Clothing and Equipment

a. Protection Against Hazardous Conditions. Protective clothing and equipment are essential to all operations that are inherently hazardous, easily become hazardous by unsafe acts of personnel, or are made hazardous by existing conditions such as temperature, footing, illumination and visibility, ventilation, atmospheric contaminants, skin contaminants, physical and biological hazards, noise, and radioactivity. Responsibility and procedures to be used in determining hazards and the qualifying requirements for standard and non-standard protective clothing are contained in AR 385-32.

b. Ear Protection. Ear protection of personnel working in noise hazardous area should be in accordance with provisions of TB MED 251.

c. Protective Devices. Protective devices are described in DA Pam 385-3. The Pam contains information on protective equipment for use in hazardous environments. Information is included to assist in the procurement and identification of equipment required by MOS.

5-12. Storm and High Wind Procedures

a. Hurricane Plan. The airfield service branch should have a detailed plan to be implemented whenever a hurricane or high wind warning is received. The plan should include, but not be limited to—

(1) Evacuating, storing, or tiedown of aircraft. Tiedown instructions in the aircraft operator's manual must be followed.

(2) Removing loose objects from parking areas, i.e., chocks, fire extinguishers, boarding ramps, tool boxes, work platforms.

(3) Protecting window glass and interiors by using prefabricated window covers. To allow for

pressure equalization, building should not be made airtight.

(4) Performing checks on backup power sources to insure efficient operation and that required fuel and oil are on hand.

b. Evacuation Plans. Plans must also be prepared to handle mass evacuations, if the airfield has been designated as an aircraft refuge facility. AR 95-87 contains information on procedures and reports.

5-13. Dangerous Cargo

Each Army airfield should have at least one designated area for loading, unloading, or parking aircraft with dangerous cargo. Paragraph 6-2f, g, and h contains references to be considered for different types of cargo.

5-14. Priority Handling of Military Aircraft

a. Special Procedures for Handling Aircraft. The airfield service branch should have established procedures for handling aircraft which require special attention. The branch SOP should list, in detail, those procedures to be employed when aircraft containing VIP or dangerous cargo use the airfield. Aircraft conducting emergency or precautionary landings also require individual attention tailored to the particular problem involved.

b. Security Measures. Presidential and Vice Presidential flights require additional security measures as outlined in AR 190-7.

5-15. Ground Procedural Violation

Ground procedural violations are defined in paragraph 4-13. Personnel of the service branch are usually working on the aircraft movement area and should constantly be aware of potential hazards. Violators should be reported to the dispatch branch in accordance with locally established rules. Personnel of the airfield service branch must be especially alert as to their own work performance and habits, since their duties are normally performed in sensitive areas.

5-16. Reports—Logs

The following reports or logs should be maintained:

a. Training and proficiency records of assigned personnel.

b. Record of driver qualifications.

c. Forms required as outlined in paragraph 5-3.

d. Aircraft preflight log entries.

e. Vehicle logs.

f. Duty rosters.

g. Daily operation log.



CHAPTER 6

SAFETY

6-1. Aircraft Accident and Prevention

a. Accident Procedures. Procedures for the prevention, investigation, and reporting of Army aircraft accidents are contained in AR 95-5 and AR 385-40.

b. US Army Agency for Aviation Safety (USAAAVS). All aircraft accidents are reviewed by USAAAVS. AR 10-29 describes the USAAAVS mission which is to determine, through research and analysis, where improvement can be made in aviation materiel operations, supervision, personnel, and training, which relate to aircraft accidents.

c. USAAAVS Accident Investigation Assistance. USAAAVS will provide assistance to investigate aircraft accidents when requested to do so by the command desiring assistance or as deemed necessary by the Commander, USAAAVS.

d. Reporting. AR 95-1 and AR 600-10 prescribe policy and procedures for reporting casualties and for notifying the next of kin of personnel involved in aircraft accidents. AR 40-21 covers the medical aspects of aircraft accident investigations and provides, in detail, the duties and actions each official performs relating to injuries and facilities.

e. FAA Participation in Accident Investigation. AR 95-30 outlines participation by the FAA in the military accident investigation when a function of the FAA may have been involved. Notification to the FAA will be made by the most convenient means and at the same time that notification is forwarded to higher military authority.

6-2. Nonaircraft Accidents and Prevention

a. Procedures. Procedures for the prevention, investigation, and reporting of Army accidents are contained in AR 385-40.

b. Accident Prevention Guidelines. Accident prevention guidelines, designed to reduce and keep to a minimum accidental manpower and monetary losses, are furnished in AR 385-10. In-

formation is provided on safety training, promotional and educational materials, and awards. Safety inspections should be conducted to discover conditions, procedures, and practices which, if allowed to exist, might cause accidents. DA Pam 385-1 provides the guidance necessary to comply with AR 385-10. Guidance for the prevention of motor vehicle accidents is contained in AR 385-55.

c. Application of State Traffic Laws. State traffic laws usually apply to traffic violators at each installation. Violators are normally placed under the jurisdiction of the United States Magistrate, otherwise local policy will provide guidance. If state traffic laws are applicable, offenders may be tried for minor offenses before the magistrate whose judicial district includes the installation.

d. Establishment of Restricted Areas and Vehicular Traffic Rules. When establishing restricted areas and vehicular traffic rules on an airfield, review AR 27-40 and AR 380-20.

e. Hazard Marking Signs. Signs marking hazards should be erected, when necessary, to improve safety. AR 385-30 should be consulted for standards to be used for signs and markings designed to alert personnel of hazards in all operational and training areas. Signs should be considered as interim devices for protection pending removal of the hazard. Sign, sign shape, and color coding assure recognition of specific hazards by a process of association. Temporary methods of marking a hazard may be necessary and is encouraged.

f. Monitoring Nuclear Shipments. Each major headquarters charged with nuclear movement control responsibilities will assist in monitoring the progress of nuclear shipments while en route. For shipment by air, the reporting system will provide for submission of status reports upon departure and upon closing at the destination. Any deviations from programmed route or schedule will be reported as soon as possible. AR 50-5 provides measures for controlling nuclear accidents and incidents when they occur and assures that

nuclear weapons in custody of Army organizations are maintained in a safe, secure environment.

g. Transportation of Dangerous Chemicals. Policies, responsibilities, and guidance relating to the transportation of dangerous chemicals are covered in AR 55-56 and other referenced regulations. The regulations define chemical agents and explain how they will be transported. Biological materials are covered in AR 55-16. Personnel who handle compressed gas cylinders must be cognizant of the characteristics and physical dangers associated with compressed gases (AR 700-68). When shipment of gas cylinders or dangerous material by military aircraft is contemplated, refer to TM 38-250 and AR 95-27.

h. Quantity-Distance Safety Standards. Quantity-distance safety standards, applicable to dangerous materiel within CONUS and oversea commands, are contained in TM 9-1300-206. Procedures for processing waivers to these mandatory standards are outlined in AR 740-1.

6-3. Motor Vehicle Operation

a. Standard driver licensing requirements are contained in AR 600-55. Driver training and qualification procedures are outlined in AR 58-1 and TM 21-300.

b. Drivers of vehicles operating on the ramp, taxiway, or runway should possess evidence of satisfactorily passing a written examination which would include clearance requirements between aircraft and vehicles, light signals, and radio procedures if vehicles are so equipped. This examination should be revised and administered on an annual basis.

c. Vehicles regularly operating on the airfield should have the meaning of air traffic control light signals displayed on the dash.

d. All vehicles authorized to operate on the airfield should be painted aviation yellow or display a red and white checkered flag, 3' x 3', on a staff affixed to the right front or right rear bumper.

APPENDIX A

PUBLICATIONS RELATED TO AIRFIELD OPERATIONS

1. General

The listed publications are not required in all airfield operations and ATC facilities. Operations officers or facility chiefs should obtain only those publications that apply to their operations. Guidance for obtaining flight information documents is contained in AR 95-14. Department of the Army Pamphlets of the 310-series should be consulted frequently for latest changes or revisions of references given in paragraphs 2 through 8 below.

2. Army Regulations (AR)

1-24	Army Management Doctrine.
1-50	Work Measurement.
1-65	Work Simplification.
5-2	Comptrollers in the Department of the Army Field Establishment.
10-29	United States Army Agency for Aviation Safety (USAAVS).
(S) 11-12	Army Programs Logistic Priorities (U).
11-14	Army Programs Logistic Readiness.
11-20	Army Cost Reduction Program.
15-1	Committee Management.
20-1	Inspector General Activities and Procedures.
27-20	Claims.
27-40	Litigation.
30-1	The Army Food Service Program.
30-46	Subsistence Report and Field Ration Request.
37-14	Programming and Financing of Facilities at Military Installations Utilized by Two or More Departments of Defense Components.
37-19/SECNAVINST 7020.4B/AFR 172-3	Host-Tenant Relationships.
37-27	Accounting Policy and Procedures for Intragovernment, Intradefense, and Intra-Army Transactions.
37-103-1	Finance and Accounting for Installations—Imprest Funds.
37-105	Finance and Accounting for Installations; Civilian Pay Procedures.
37-105-1	United States Civil Service Commission Salary Table No. 58.
40-8	Temporary Flying Restrictions Due to Exogeneous Factors.
40-12/Navy GO No. 20/AFR 161-4	Medical and Agricultural Foreign and Domestic Quarantine Regula- tions for Vessels, Aircraft, and Other Transport of the Armed Forces.
40-20	Evacuation of Patients.
40-21	Medical Aspects of Army Aircraft Accident Investigation.
40-501	Standards of Medical Fitness.
40-574/AFR 91-22/ SECNAVINST 6250.5	Aerial Dispersal of Pesticides, Utilities; Operation and Maintenance.
50-5	Nuclear Safety.
55-16	Movement of Cargo by Air and Surface—Including Less Than Release Unit and Parcel Post Shipments.

55-55	Transportation of Radioactive and Fissile Materials Other Than Weapons.
55-56	Transportation of Dangerous or Hazardous Chemical Materials.
55-203	Movement of Nuclear Weapons, Nuclear Components, and Related Classified Nonnuclear Materiel.
58-1	Joint Procedures for Management of Administrative Use Motor Vehicles.
59-120/AFR 76-26/ OPNAVINST 4630.11C/MCO 4631.3A	"Blue Bark" Passengers.
95-1 ^{1, 2, 3}	Army Aviation—General Provisions and Flight Regulations.
95-5 ^{2, 3}	Aircraft Accident Prevention, Investigation, and Reporting.
95-9 ^{1, 2, 3}	Terminal Air Navigation and Air Traffic Control Facilities and Procedures.
95-11 ¹ /AFR 102-8/ OPNAVINST 3722.8H	FAA Flight Service Interphone Communications System Procedures.
95-12 ^{1, 2, 3} /AFR 62-5/ OPNAVINST 3760.1C/MCO 3760.2	Reporting and Investigating Alleged Violations of Flying Regulations.
95-14 ^{1, 2, 3}	Army Aviation Flight Information.
95-16	Weight and Balance—Army Aircraft.
95-18	Grounding of Army Aircraft and Safety of Flight Messages.
95-21 ^{1, 2, 3} /AFR 60-24/ OPNAVINST 3722.30A/MCO P3720.1B	Security Control of Air Traffic and Air Navigation Aids (SCATANA).
95-22	United States Army Aircraft Transportation Priorities and Procedures.
95-23 ^{1, 2, 3}	United States Army Aeronautical Services Office.
95-24 ^{1, 2, 3}	Army Airfield and Heliport Air Traffic Activity Report.
95-26 ^{1, 3}	Aircraft Fire Fighting and Rescue.
95-27/AFR 55-14/ OPNAVINST 3710.31A	Operational Procedures for Aircraft Carrying Dangerous Materials.
95-30/AFR 127-11/ OPNAVINST 3750.16A/CG 370	Participation in a Military Aircraft Accident Safety Investigation.
95-37 ^{1, 2, 3}	Army Air Traffic Control—General Provisions.
95-40	Management of Army Aircraft.
95-50 ^{1, 2, 3}	Airspace Responsibilities and Procedures.
95-63	Army Aviation Instrument Program.
95-70	Army Aviation Planning Manual.
95-87/AFR 95-87/ OPNAVINST 3730.3D	Aircraft Hurricane Evacuation.
95-110/AFR 60-22/ OPNAVINST 3722.5E/MCO 3722.1B	Identification and Security Control of Military Aircraft.

^{1, 2, 3} See use designations at end of appendix.

105-12	Unclassified Voice Communications.
105-17	Army Telecommunications Centers/Communications Centers Publication List.
105-22	Telecommunications Requirements Planning, Developing, and Processing.
105-23	Administrative Procedures for Communication Services.
105-24	Radio Frequency and Call Sign Assignments for Army Activities Within the Continental United States.
105-34	Reduction and Control of Telecommunications Traffic in an Emergency (MINIMIZE).
105-67/ OPNAVINST 2410.22C/AFR 100-3	Electromagnetic Compatibility Program—Reporting of US Military Electronic Equipment Environmental Data.
115-10/AFR 105-3	Meteorological Support for the US Army.
115-12	United States Army Requirements for Weather Service Support.
190-7	Physical Security Standards for the Protection of Presidential Army Aircraft.
210-20	Master Planning for Permanent Army Installations.
210-30	Selection of Sites for Army Installations.
210-95	Assistance to Domestic Aircraft and Aircraft to Foreign Registry.
230-11	Army Flying Club Program.
310-25	Dictionary of United States Army Terms.
310-49	The Army Authorization Documents System (TAADS).
310-50	Authorized Abbreviations and Brevity Codes.
340-15	Preparing Correspondence.
340-16	Safeguarding "FOR OFFICIAL USE ONLY" Information.
340-17	Release of Information and Records From Army Files.
340-18-series	(Army Function File System.)
380-5	Department of the Army Information Security Program.
380-20	Restricted Areas.
(C) 380-40	DA Policy for Safeguarding COMSEC Information (U).
380-41	Control of COMSEC Materiel.
380-150	Access to and Dissemination of Restricted Data.
385-10	Army Safety Program.
385-30	Safety Color Code Markings and Signs.
385-32	Protective Clothing and Equipment.
385-40	Accident Reporting and Records.
385-55	Prevention of Motor Vehicle Accidents.
385-70/AFR 55-15/ OPNAVINST 3710.18B	Unmanned Free Balloons, Moored Balloons and Kites, Unmanned Rockets and Derelict Friendly Airborne Objects.
405-10	Acquisition of Real Property and Interests Therein.
405-80	Granting Use of Real Estate.
415-13	MCA Program—Disposal of Structures.
415-15	MCA Program Development.
415-17	Empirical Cost Estimates for Military Construction and Cost Adjustment Factors.
415-22	Protection of Petroleum Installations and Related Facilities.
415-35	Minor Construction.
415-36	Peacetime Planning and Construction in Oversea Base Rights Areas Garrisoned on Temporary Basis.
420-19	Mobile Equipment Rental.
420-22	Preventive Maintenance.

420-43	Electric Services.
420-46	Water and Sewerage.
420-47	Refuse Collection and Disposal.
420-54	Air Conditioning, Evaporative Cooling, Dehumidification, and Mechanical Ventilation.
420-56	Permanently Installed Petroleum Products Storage, Distribution, and Dispensing Systems.
420-72	Surfaced Areas.
420-90	Fire Prevention and Protection.
500-60	Disaster Relief.
570-2	Organization and Equipment Authorization Tables—Personnel.
600-10	The Army Casualty System.
600-55	Motor Vehicle Driver—Selection, Testing, and Licensing.
600-106	Aeronautical Designation and Flying Status for Army Personnel.
600-107	Medical Restriction/Suspension From Flight Duty, Non-medical Suspensions, Flying Evaluation Boards, and Flight Status Review System.
611-101	Manual of Commissioned Officer Military Occupational Specialities.
611-201	Enlisted Military Occupational Specialities.
640-10	Individual Military Personnel Records.
670-10	Furnishing Uniforms or Paying Uniform Allowances to Civilian Employees.
700-4	Supply and Maintenance Technical Assistance Program.
700-68/DSAR 4145.25/ NAVSUPINST 4440.128A/MCO 10330.2A/AFR 67-12	Compressed Gases and Gas Cylinders.
700-72	Mobile Electric Power (MEP).
703-1	Petroleum Supply and Management Activities.
705-16	Radio Frequency Allocations and Assignments for Equipment Under Development, Production, and Procurement.
710-1	Centralized Inventory Management of the Army Supply System.
710-2	Material Management for Using Units, Support Units, and Installations.
735-10	Principles and Policy: Accounting for Lost, Damaged, and Destroyed Property.
735-11	Accounting for Lost, Damaged, and Destroyed Property.
740-1	Storage and Supply Activity Operations.
746-1	Color, Marking, and Preparation of Equipment for Shipment.
750-13	Army Oil Analysis Program.
750-25	Army Meteorology and Calibration System.

3. Technical Manuals (TM)

1-225	Navigation for Army Aviation.
1-235	Float and Ski Operations for Army Aircraft.
1-300	Meteorology for Army Aviation.
5-225	Radiological and Disaster Recovery at Fixed Military Installations.
5-315	Fire Fighting and Rescue Procedures in Theaters of Operations.
5-330/AFM 86-3, Vol II	Planning and Design of Roads, Airbases, and Heliports in the Theater of Operations.
5-678	Repair and Utilities—Petroleum, Oils and Lubricants (POL).
5-687	Repair and Utilities; Fire Protection Equipment and Appliances; Inspections, Operations, and Preventive Maintenance.

5-800-1	Construction Criteria for Army Facilities.
5-803-4	Planning of Army Aviation Facilities.
5-811-5	Army Aviation Lighting (to be published).
5-823-4	Army Airfield—Heliport Operational and Maintenance Facilities.
5-826-2	Engineering and Design: Army Airfield, Flexible—Pavement Evaluation.
5-826-3	Engineering and Design: Army Airfield Rigid Pavement Evaluation.
5-826-4	Engineering and Design: Army Airfield—Heliport Pavement Reports.
5-888-8/AFM 88-40, chap 36	Airfield and Heliport Flexible Pavement Evaluation—Emergency Construction.
5-3825-213-10	Operator's Manual: Snow Removal Unit, Self-Propelled (FWD Model S-349-V).
5-4210-200-20	Truck, Fire Fighting, Models 530 BA and 530 BAW.
5-4210-212-15	Truck, Fire Fighting: Models 530 BAM and 530 BAWM.
9-207	Operation and Maintenance of Ordnance Materiel in Cold Weather (0 to -65°F).
9-1300-206	Care, Handling, Preservation and Destruction of Ammunition.
10-1101	Petroleum Handling Equipment and Operations.
10-1105	Inspecting and Testing Petroleum Products.
10-1109	Organizational Maintenance: Military Petroleum Pipelines, Tanks, and Related Equipment.
10-1113	Petroleum Tank Vehicle Operation.
11-490	Army Communication Facilities Autodin Station and Teletypewriter Station Operating Procedures.
11-2557-25 ^{1, 2, 3}	United States Standard Flight Inspection Manual (FAA 8200.5) (when revised, will be TM 95-225).
11-2557-26 ^{1, 2, 3}	United States Standard Terminal Instrument Procedures (FAA 8260.3) (when revised, will be TM 95-226).
11-2557-28 ^{1, 2, 3}	United States Interagency Ground Inspection Manual (FAA 6000.6) (when revised, will be TM 95-228).
11-5825-202-12	Organizational Maintenance Manual: Radio Beacon Set AN/GRN-6.
11-5825-245-12	Operator and Organizational Maintenance Manual: Beacon Set, Radio AN/TRN-25.
11-5840-281-12	Operator's and Organizational Maintenance Manual: Radar Set AN/TPN-18.
11-5840-293-12	Operator's and Organizational Maintenance Manual: Radar Set AN/FPN-40 (with IFF capability).
11-5840-345-20	Operator's Manual: Radar System AN/FSQ-84.
11-5895-468-12	Organizational Maintenance Manual Including Repair Parts and Special Tool Lists: Interrogator Set AN/TPX-44.
11-5895-474-12	Operator and Organizational Maintenance Manual: Landing Control Central AN/TSQ-71A.
11-5895-479-12	Operator and Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists): Interrogator Set AN/TPX-41.
11-5895-579-12	Operator and Organizational Maintenance Manual: Aircraft Control Central AN/TSQ-70A.
11-5895-590-10	Operator's Manual: Air Traffic Control Communication Sets AN/FSQ-75(V)1, AN/FSQ-75(V)2, and AN/FSQ-75(V)3.
21-300	Driver Selection and Training (Wheeled Vehicles).
38-250/AFM 71-4/ DSAM 4145.3/ NAVSUP Pub 505/MCO P4030.19C	Packaging and Materials Handling: Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft.

^{1, 2, 3} See use designations at end of appendix.

38-750	The Army Maintenance Management Systems (TAMMS).
55-405-9	Army Aviation Maintenance Engineering Manual: Weight and Balance.
55-405-10	Army Aviation Maintenance Engineering Manual: Ground Handling Test and Service Equipment.
55-410	Aircraft Maintenance, Servicing, and Ground Handling Under Extreme Environmental Conditions.
55-1500-204-25/1	General Aircraft Maintenance Manual.
95-200	Air Traffic Control Facility Operations.
740-90-1	Administrative Storage of Equipment.

4. Technical Bulletins (TB)

3-300-1	Document Destroyer, Emergency, Incendiary, M3.
AVN 1-series ^{1, 2}	(Army Aviation Flight Information Bulletin.)
55-6650-300-15	Spectrometric Oil Analysis.
95-1 ^{1, 2}	United States Army Air Traffic Control and NAVAID Facility Standards.
ENG 101	Lighting Sets for Army Airfield Runways and Heliports.
CML 110	File Destroyer, Incendiary, ABC-M4.
MED 251	Noise and Conservation of Hearing.
750-1	Aviation Electronics Configuration Directory.

5. DA Pamphlets (DA Pam)

1-50	How and Where to Use Work Measurement in the Army.
1-51	Management Analysis in the Department of the Army.
1-52	Techniques of Work Simplification.
95-2	Inadvertent Instrument Flying Sense.
95-3	Human Sense.
95-6	Hot Weather Sense.
95-8	Mountain Flying Sense.
310-1	Index of Administrative Publications.
310-2	Index of Blank Forms.
310-3	Index of Doctrinal, Training, and Organizational Publications.
310-4	Military Publications—Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8, and 9), Supply Bulletins and Lubrication Orders.
310-13	Posting and Filing Publications.
310-15	Forms Management and Standardization.
350-10	US Army Formal Schools Catalog.
385-1	Unit Safety Management.
385-3	Protective Clothing and Equipment.
420-2	Management of Fire Prevention and Protection Program.
570-4	Manpower Procedures Handbook.
570-551	Staffing Guide for United States Army Garrisons.

6. Army Subject Schedules (ASubjScd)

1-4 ^{1, 2}	Terminal Air Traffic Control Facilities.
1-7	Flight Operations Activities.

7. Field Manuals (FM)

1-60	Army Air Traffic Operations.
21-60	Visual Signals.

^{1, 2}See use designations at end of appendix.

(C)32-5
101-5

Signal Security (SIGSEC) (U).
Staff Officers' Field Manual: Staff Organization and Procedures.

8. Federal Aviation Administration (FAA) Publications

(FAA publications may be obtained from tie-in FAA flight service stations.)

7110.8 ^{1, 2, 3}	Terminal Air Traffic Control Manual.
7110.9	En Route Air Traffic Control.
7110.10 ^{1, 2, 3}	Flight Services.
7220.1 ^{1, 2, 3}	Air Traffic Control Certification Procedures.
ATP 7220.6	Certification and Rating.
Form 7230-8 ^{1, 2, 3}	Flight Progress Strips.
7233-1	Flight Log.
7233-2	Flight Log.
7340.1 ^{1, 3}	Contractions.
7350.1 ^{1, 3}	Location Identifiers.
7610.4	Special Military Operations.

Alaska Airman's Guide and Chart Supplement.

Pacific Airman's Guide and Chart Supplement

9. Federal Aviation Administration Airman's Information Manual (AIM)

Part 1 ^{1, 2, 3}	Basic Flight Manual and ATC Procedures.
Part 2 ³	Airport Directory.
Part 3 ^{1, 2, 3}	Operational Data and Notices to Airmen.
Part 4 ^{1, 3}	Graphic Notices and Supplemental Data.

10. Federal Aviation Administration Advisory Circular (AC)

Titles of current Federal Aviation Administration Advisory Circulars are contained in the Federal Register. Advisory Circulars are for sale by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

70-series	(Airspace.)
90-series	(Air Traffic Control and General Operations.)
150-series	(Airports.)
170-series	(Air Navigational Facilities.)
180-series	(Administrative.)
210-series	(Flight Information.)

11. Federal Aviation Administrative Regulations (FAR)

a. Volume I.^{1, 3}

Part I	Definitions and Abbreviations.
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b. Volume II.

Part 2	General Rule Making Procedures.
Part 13	Enforcement Procedures.
Part 15	Nondiscrimination in Federally Assisted Programs of the Federal Aviation Administration.
Part 21	Certification Procedures for Products and Parts.
Part 37	Technical Standard Order Authorizations.
Part 39	Airworthiness Directives.
Part 45	Identification and Registration Marking.
Part 47	Aircraft Registration.

^{1, 2, 3} See use designations at end of appendix.

Part 49	Recording of Aircraft Titles and Security Documents.
Part 183	Representatives of the Administrator.
Part 185	Testimony by Employees and Production of Records in Legal Proceedings.
Part 187	Fees.
Part 189	Use of Federal Aviation Agency Communications System.
<i>c. Volume III.</i>	
Part 23	Airworthiness Standards: Normal, Utility, and Acrobatic Category Airplanes.
Part 25	Airworthiness Standards: Transport Category Airplanes.
<i>d. Volume IV.</i>	
Part 27	Airworthiness Standards: Normal Category Rotorcraft.
Part 29	Airworthiness Standards: Transport Category Rotorcraft.
Part 31	Airworthiness Standards: Manned Free Balloons.
Part 33	Airworthiness Standards: Aircraft Engines.
Part 35	Airworthiness Standards: Propellers.
<i>e. Volume V.</i>	
Part 43	Maintenance, Preventive Maintenance, Rebuilding, and Alteration.
Part 145	Repair Stations.
Part 149	Parachute Lofts.
<i>f. Volume VI.^{1, 3}</i>	
Part 91	General Operating and Flight Rules.
Part 93	Special Air Traffic Rules and Airport Traffic Patterns.
Part 99	Security Control of Air Traffic.
Part 101	Moored Balloons, Kites, Unmanned Rockets and Unmanned Free Balloons.
Part 103	Transportation of Dangerous Articles and Magnetized Materials.
Part 105	Parachute Jumping.
<i>g. Volume VII.</i>	
Part 123	Certification and Operations: Air Carriers and Commercial Operators of Large Aircraft.
Part 127	Certification and Operations of Scheduled Air Carriers With Helicopters.
Part 129	Operations of Foreign Air Carriers.
<i>h. Volume VIII.^{1, 3}</i>	
Part 133	Rotorcraft External Load Operations.
Part 135	Air Taxi Operators and Commercial Operators of Small Aircraft.
Part 137	Agricultural Aircraft Operations.
<i>i. Volume IX.^{1, 3}</i>	
Part 61	Certification: Pilots and Flight Instructors.
Part 63	Certification: Flight Crewmembers Other Than Pilots.
Part 65	Certification: Airmen Other Than Flight Crewmembers.
Part 67	Medical Standards and Certification.
Part 141	Pilot Schools.
Part 143	Ground Instructors.
Part 147	Aviation Maintenance Technicians Schools.
<i>j. Volume X.</i>	
Part 139	Certification and Operations: Land Airports Serving CAB-Certificated Scheduled Air Carriers Operating Large Aircraft (Other than Helicopters).

^{1, 3} See use designations at end of appendix.

Part 151	Federal Aid to Airports.
Part 152	Airport Aid Program.
Part 153	Acquisition of US Land for Public Airports.
Part 155	Release of Airport Property From Surplus Property Disposal Restrictions.
Part 159	National Capital Airports.
Part 165	Wake Island Code.
Part 167	Annette Island, Alaska, Airport.

k. Volume XI.^{1, 2}

Part 71	Designation of Federal Airways, Controlled Airspace and Reporting Points.
Part 73	Special Use Airspace.
Part 75	Establishment of Jet Routes.
Part 77	Objects Affecting Navigable Airspace.
Part 95	IFR Altitudes.
Part 97	Standard Instrument Approach Procedures.
Part 157	Notice of Construction, Alteration, Activation, and Deactivation of Airports.
Part 169	Expenditure of Federal Funds for Non-Military Airports or Air Navigation Facilities Thereon.
Part 171	Non-Federal Navigation Facilities.

12. Allied Communications Procedures (ACP)

121	Allied Communication Instruction—General.
122	Allied Communications Instruction—Security.

13. Department of the Air Force Publication, Air Force Manual (AFM)

(Air Force publications which have not been integrated into the Department of Army publication system may be requisitioned through the Office of The Adjutant General in accordance with AR 310-71.)

86-4	Standard Facility Requirements.
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14. Department of Defense Publications (DOD)

(The Directives Branch, OASD (Comptroller), Washington, DC 20301, will provide reference service on DOD Directives and Instructions.)

DOD Manual 4270.1-M	Construction Criteria Manual.
DOD Directive 4515.13-R	Department of Defense Air Transportation Eligibility Regulation.
(C) DOD Directive 4605.2	Restoration Priorities for Military Communication Channels (U).

15. Other Publications

ASPR 3-607	Armed Services Procurement Regulations.
Federal Meteorological Handbook No. 1	Surface Observations.

¹ Control tower publication.

² Ground controlled approach publication.

³ Approach control publication.



APPENDIX B

FLIGHT INFORMATION PUBLICATIONS

1. General. The listed publications are not required in all airfield operations and ATC facilities. Operations officers or facility chiefs should obtain only those publications that apply to their operations. Guidance for obtaining flight information documents is contained in AR 95-14. Information on aeronautical charts published by Defense Mapping Agency Aerospace Center may be obtained from: Distribution Division C-44, National Ocean Survey, Riverdale, Maryland 20840.
2. Planning Document.
 - a. Section I. General Information.
 - b. Section II. Planning Data and Procedures.
 - c. Section IIA. Military Training Routes—US.
 - d. Section IIB. Special Use Airspace.
 - e. Section III. International Rules and Procedures.
3. FLIP Wall Planning Chart.
4. En Route Low Altitude Charts and En Route High Altitude Charts.
5. Area Navigation Charts (selective distribution).
6. Terminal Instrument Approach Procedures.
7. En Route Supplements—IFR and VFR.
8. Standard Instrument Departures (SIDS).
9. Sectional Charts.
10. FLIP Correction Cards.
11. DOD Catalog of Aeronautical Charts and Flight Information Publications.
12. DOD Bulletin.
13. DMA Airspace Center Chart Updating Manual (CHUM).
14. DOD Bulletin Digest.
15. Navigation, General Planning Plotting, Topographic Charts, and Regional Geographic Maps.
 - a. Airfield Plan Map—Showing runways, taxiways, dimensions, field elevation, gradient, overruns, hazards, terrain features, traffic pattern.
 - b. Sectional Charts.
 - c. Terminal Control Area (TCA) Charts.
 - d. USAF Pilotage Charts.
 - e. Operational Navigation Charts.
 - f. Tactical Pilotage Chart.
 - g. Weather Plotting Charts.
 - h. Special Air Operations Charts.
 - i. Applicable Airfield Flying Regulations.
 - j. Notices to Airmen (NOTAM). Pertinent to Area of Operations.
 - k. Flight Clearance Forms.
 - l. Pilot's Flight Plan and Flight Log.
 - m. Standard Navigation and Signals Reference Manuals.
 - n. Air Almanacs and Astronomical Reduction Tables.
 - o. Cargo and Passenger Manifests.
16. USAF Foreign Clearance Guide (FCG).
 - a. Unclassified.
 - b. Classified. Must be available when operationally required.
17. International Civil Aviation Organization (ICAO) Documents.

(Information and prices of ICAO publications may be obtained from Secretary General, International Civil Aviation Organization, International Aviation Bldg, 1080 University St., Montreal 3, Quebec, Canada.)

The flight dispatch section will maintain only those ICAO documents needed for mission accomplishment as determined by the base operations officer. Bases operating in conjunction with NATO forces must maintain the following documents:

 - a. Flight Plan Forms.
 - b. ICAO—Annex 2—Rules of the Air.
 - c. ICAO—Annex 6—Operation of Aircraft.
 - d. ICAO—Annex 9—Facilitation.

e. ICAO—Annex 10—Aeronautical Telecommunication.

f. ICAO—Annex 14—Aerodromes.

g. ICAO—Annex 15—Aeronautical Information Services.

h. ICAO—Document 4444—RAC/501—Rules of the Air and Air Traffic Services.

i. ICAO—Document 4478—COM/501—Communications Procedures.

j. ICAO—Document 6100—COM/504—Communications, Codes and Abbreviations.

k. ICAO—Document 6938—COM/534—Abbreviations of Aeronautical Authorities, Services, and Aircraft Operating Agencies.

l. ICAO—Document 7030—Regional Supplementary Procedures.

m. ICAO—Document 7181—COM/546—Radio Telephone Procedures.

n. ICAO—Document 7458—OPS/610—Holding and Approach to Land.

o. ICAO—Document 7910—Location Indicators.

p. ICAO—Document 7946—AN/868—Manual of Teletypewriter Operating Practices.

21. Army Technical Manuals.

- | | |
|------------|---|
| 11-2557-25 | United States Standard Flight Inspection Manual (FAA 8200.5) (when revised, will be TM 95-225). |
| 11-2557-26 | United States Standard Terminal Instrument Procedures (FAA 8260.3) (when revised, will be TM 95-226). |
| 11-2557-28 | United States Interagency Ground Inspection Manual (FAA 6000.6) (when revised, will be TM 95-228). |

22. Technical Bulletin.

AVN 1—Series (Army Aviation Flight Information Bulletin.)

23. Operators. —10 manuals for the type of aircraft normally operating from your airfield.

q. Language Glossaries.

18. Federal Aviation Administration (FAA) Publications.

a. 7110.8 Terminal Air Traffic Control Manual.

b. 7110.10 Flight Services.

c. 7340.1 Contractions.

d. 7350.1 Location Identifiers.

e. Airman's Information Manual.

f. International Flight Information Manual.

19. Federal Aviation Administration Regulations.

a. Volume I.

b. Volume II.

c. Volume IV.

d. Volume VI.

e. Volume VIII.

f. Volume IX.

g. Volume X.

h. Volume XI.

20. Army Regulations. 95-series.

APPENDIX C**SOP FORMAT**

AIR TRAFFIC CONTROL BRANCH
JONES ARMY AIRFIELD
AKRON, OKLAHOMA

24 March 1970

STANDARD OPERATING PROCEDURE

1. Subject: SOP FORMAT
2. Purpose. To outline a standard SOP format for use by AAF operation divisions and subordinate branches.
3. General.
 - a. Standard operating procedures should address one subject or action. Some appropriate areas which would be covered by SOP are—
 - (1) Procedures used between the control tower and the GCA unit.
 - (2) Relay of flight plan and flight data information between the dispatch branch and the control tower.
 - b. SOP are distributed to all branches having a responsibility outlined in the SOP. The branches shall insure that the SOP is readily available at appropriate position of operation.
 - c. SOP are dated and numbered consecutively. Revisions to the basic SOP should use the original number.
4. Procedural Guidance. Additional paragraphs are added, as required, to explain and detail operational procedures, coordination, and responsibility. Separate paragraphs would be used for—
 - a. Operating positions and responsibilities.
 - b. Equipment use and maintenance.
 - c. Forms, records, and reports.
 - d. Aircraft emergencies.
5. Cancellation Date. In order to insure currency and review of SOP, the final paragraph should contain a cancellation date. The SOP should not be effective for a period in excess of one year.

JOHN J. JONES
LTC, SC
Operations Officer



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GLOSSARY

Army airfield (AAF)—An Army airfield is an airfield/heliport owned or leased by the United States Government over which the Army or Army National Guard has primary jurisdiction.

AAF NOTAM serial number—A number assigned to each NOTAM by the AAF for accountability in the NOTAM file. This number is assigned in numerical sequence, from 01 to 99, beginning the first of each month.

AAF operations—A facility established by the installation commander to supply clearance authority, weather forecasts, and services concerned with aircraft operations.

AATCU—Army air traffic control unit.

ACC—Area control center.

AF—Air Force.

AGL—Above ground level.

AHP—Army heliport.

AIM—Airman's Information Manual.

airport traffic control service—Air traffic control service provided by an airport traffic control tower for aircraft operating on the movement area and in the vicinity of an airport.

Airmen's Advisory (AIRAD)—A notice to airmen normally given only local dissemination during radio contact with aviators.

ALNOT—Alert notice.

ALTRV—Altitude reservation.

AOD—Airfield officer of the day.

ARAC—Army radar approach control.

ASR—Airport surveillance radar.

ATCS—Air traffic control specialist.

ATIS—Automatic terminal information service.

ATP—Air traffic procedures.

CAAG—Civil Aviation Assistance Group.

CARF—Central altitude reservation facility.

CAT—Clear air turbulence.

CNF—Central NOTAM Facility. (The facility established to centrally supervise the USAF NOTAM System within a defined area.) A number is assigned by the Central NOTAM Facility for NOTAM identification and accountability.

CR—Certification and rating.

DMA—Defense Mapping Agency.

EAC—Expected approach clearance time.

EFC—Expected further clearance time.

FAWS—Flight Advisory Weather Service.

FIDO—Flight Inspection District Office.

field condition information—Non-NOTAM information about local conditions that may be a hazard to aircraft landing/departing, but would not normally affect the ultimate decision of a pilot contemplating a departure or planning an inbound flight. This includes information on such items as the following (plus others as required):

- a. Construction work on or adjacent to air traffic movement area.
- b. Rough portions of the movement area.
- c. Snowdrifts, or piled snow or dirt, on or along the edges of the movement area.
- d. Aircraft, vehicle, or personnel on/adjacent to the movement area.

field notice—A communication, normally in letter form, which transmits information required for the approval of terminal instrument procedures, for the publication of these procedures, to effectively monitor the NAT-127 program, and for reference in processing revisions to TM's 11-2557-25, -26, -28, and FAA Publication 7110.8.

FIR—Flight information region.

FL—Flight level.

Flight Information Bulletin (FIB)—A technical bulletin published by the US Army Aeronautical Services Office. The official Department of the Army weekly source of air operational data covering Army, Army National Guard, and Army Reserve aviation activities.

FLIP—Flight Information Publication.

FSM—Flight Service Manual.

FSS—Flight Service Station.

GPI—Ground point of intercept.

HIRL—High intensity runway light.

ICAO Indicator—The four letter code group prescribed by ICAO and assigned to the location of aeronautical fixed station.

ICAO NOTAM code—The code used to relay information on the status of radio aids, aerodromes, lighting facilities, or dangers to aircraft in flight, etc., commonly called the ICAO "Q" code; it is used only to transmit NOTAM's via other than USAF communications. (See Foreword FLIP Planning Document.) When a NOTAM is received in "Q" code, it will be transmitted over Air Force Communications in clear text.

INREQ—Information request.

IRATE—Interim remote area terminal equipment.

MAP—Missed approach point.

MARSA—Military authority assumes responsibility for separation of aircraft.

MCA—Minimum crossing altitude.

MDA—Minimum descent altitude.

MEA—Minimum en route altitude.

MITO—Minimum interval takeoff.

MOCA—Minimum obstruction clearance altitude.

MRA—Minimum reception altitude.

N—US Navy.

National Airspace System (NAS)—The common system of air navigation and air traffic control encompassing communication facilities, air navigation facilities, airways, controlled airspace, special use airspace, and flight procedures authorized by FAA regulations for domestic and international aviation.

NAVAID—Navigational aids.

NOSUM—NOTAM summary.

notice to airmen (NOTAM)—A notice, in message form, requiring expeditious and wide dissemination by telecommunication means.

OHR—Operational Hazard Report.

PIREP—Pilot Weather Report.

PRF—Pulse repetition frequency.

RAALS—Remote area approach and landing system.

RADAR—Radio detection and ranging.

RATS—Remote area terminal system.

RBN—Radio beacon.

RCC—Rescue coordination center.

RCLS—Runway centerline light system.

REIL—Runway end identifier lights.

RM—Range mark.

RVO—Runway visibility by observer.

RVR—Runway visual range.

RVV—Runway visibility value.

self-cancelling NOTAM—A NOTAM that has a date-time group indicating when the condition ceases to exist.

SID—Standard instrument departure.

SIGMET—Significant meteorological information.

STAR—Standard terminal arrival route.

SVFR—Special visual flight rules.

TATCE—Tactical air traffic control equipment.

TD—Touchdown.

TERPS—Terminal instrument procedures.

TRACON—Terminal radar control facility.

TWR—Tower.

USAASO—United States Army Aeronautical Services Office.

VASI—Visual approach slope indicator.

VORTAC—VOR and TACAN collocated.

WS—Weather Service.

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